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FEDERAL RESERVE'S FIRST MONETARY POLICY REPORT FOR 2015

HEARING

BEFORE THE

COMMITTEE ON
BANKING, HOUSING, AND URBAN AFFAIRS
UNITED STATES SENATE

ONE HUNDRED FOURTEENTH CONGRESS

FIRST SESSION

ON

OVERSIGHT ON THE MONETARY POLICY REPORT TO CONGRESS PURSUANT TO THE FULL EMPLOYMENT AND BALANCED GROWTH ACT OF 1978

FEBRUARY 24, 2015

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C O N T E N T S

TUESDAY, FEBRUARY 24, 2015

WITNESS

Additional Material Supplied for the Record

FEDERAL RESERVE'S FIRST MONETARY POLICY REPORT FOR 2015

TUESDAY, FEBRUARY 24, 2015

U.S. SENATE,
COMMITTEE ON BANKING, HOUSING, AND URBAN AFFAIRS,
Washington, DC.

The Committee met at 10:05 a.m., in room SD–106, Dirksen Senate Office Building, Hon. Richard C. Shelby, Chairman of the Committee, presiding.

OPENING STATEMENT OF CHAIRMAN RICHARD C. SHELBY

Chairman SHELBY. Today the Committee will receive testimony from Federal Reserve Chair Yellen, as has been required by statute since 1978. And although the Federal Reserve Chair has been using this venue for decades to communicate directly to Congress and the American people, I and many of my colleagues have been calling for greater accountability and more effective disclosure for years.

In response, we have heard a chorus of current and former Federal Reserve officials who have lined up to defend the structure and the degree of transparency of the Fed. Further accountability to Congress, some have argued, is not needed. I am interested to hear whether the current Chair shares this view and whether she believes that the Fed should be immune from any reforms.

As far as monetary policy is concerned, many question whether the Fed can rein in inflation and avoid destabilizing asset prices when the time comes to unwind its massive $4.5 trillion balance sheet. The minutes posted online do little to answer the questions of when and how this will be done, and the most recent FOMC transcript available to the public is from 2008, over 7 years ago.

Even though the Fed has several monetary policy tools at its disposal, an action of this magnitude has never before been taken, to my knowledge. The Federal Open Market Committee continues to report that it can be patient in keeping the Federal funds rate near zero. Too much delay could lead to a more painful correction down the road.

What the FOMC is thinking and how they are analyzing this very difficult problem set remains a mystery, however; and yet some continue to dismiss calls for change or more transparency at the Fed.

I would argue, however, that there is an even greater need for additional oversight by Congress and further reforms. Our central bank has expanded its influence over households, businesses, and markets in recent years. Not only has it pushed the boundaries of traditional monetary policy, but it has also consolidated unmatched authority as a financial regulator.

As the Fed grows larger and more powerful, much of this authority has become more concentrated in Washington, DC, and in New York. The Fed emerged from the financial crisis as a super regulator, with unprecedented power over entities that it had not previously overseen. With such a delegation of authority comes a heightened responsibility, I believe, for Congress to know the impact these new requirements place on our economy as a whole.

The role of Congress is not to serve on the Federal Open Market Committee, but it is to provide strong oversight and, when times demand it, bring about structural reforms. As part of this process, the Committee will be holding another hearing next week to discuss options for enhanced oversight and reform in the Fed.

Senator Brown.

STATEMENT OF SENATOR SHERROD BROWN

Senator BROWN. Thank you, Mr. Chairman. Chair Yellen, welcome back. It is good to see you again and good to have you in front of our Committee.

Our economy continued to see strong employment gains and economic growth at the end of 2014, but we know the improvements in the economy are not being felt by enough Americans. The gains we have made over the past 5 years, 11.5 million net private sector job growth in the last 5 years, come on the heels of 9 years when we lost 4.5 million jobs. Some pundits and politicians have been predicting runaway inflation for years. They clearly do not have a very good grasp of what is happening for most Americans. Low wage growth has continued for the majority of Americans. The declining participation in the workforce is troubling. In fact, as you pointed out, Madam Chair, the income inequality gap has actually widened during this recovery.

It is good, Mr. Chairman, that we began our session today by commemorating the Selma Foot Soldiers. We must also note, though, that the wealth gap between white and black American families has widened. Low- and middle-income Americans have not benefited much from low interest rates. Workers with stagnant wages have trouble saving for a downpayment or their retirement or their children's education. These are issues that Congress should be addressing, but the everyday struggle of Americans needs to be part of the Fed's consideration in making monetary policy, too.

I appreciate, Chair Yellen, your announcement last month of plans to create the Community Advisory Council. It will have 15 members, meet twice a year with the Board in Washington to offer perspectives on their economic circumstances and the needs of low- and moderate-income communities and consumers. I hope the entire Federal Reserve System—the 12 regional banks as well as the Board in Washington—will engage community leaders way more than they have in the past and will do what you have done by setting the tone in Washington and incorporate the diverse perspectives into their decision making.

We too often hear concerns that the Fed is a system that is run by and to benefit the very largest banks. Last November, I held a Subcommittee hearing on one facet of this: regulatory capture. The hearing explores concerns about the culture of the banks and the regulators. A regulatory culture that is fair and tough, that challenges group think, and that produces rules and regulations designed to strengthen the financial stability of our economy will protect Americans' financial interests.

I applaud the Fed for finalizing strong rules for the Nation's largest and riskiest financial institutions. I encourage you to move forward to finalize outstanding proposals so that everyone will benefit from the certainty of having appropriate rules in place.

It has been more than a year since the Fed released an Advanced Notice of Proposed Rulemaking on commodities trading and physical asset ownership. For example, in today's papers, there are reports of a DOJ investigation of 10 banks for activities in the precious metals markets, and we have yet to see a proposed rule. The job does not end there. You must then send the message to your examiners that these rules must be implemented and enforced.

Finally, while some of my colleagues are eager to help you and the Fed decide monetary policy, I think that is the wrong role for Congress. I am all for transparency. I think more is better as a general rule. But every one of us knows there are times when you can do better by having a candid discussion in private.

One real goal must be to have a Federal Reserve that works for all Americans, to have a strong economy that benefits low-wage workers and the middle class as much as the wealthiest, and to have a stable and diverse financial system that provides opportunities for all Americans, not one that threatens their savings. That is why your dual mandate to promote price stability and employment, and I so appreciate, perhaps more than you, perhaps more than any of your predecessors, or at least as much understands the dual mandate, including employment, how important that is. It remains important today.

Thank you.

Chairman SHELBY. Madam Chair, welcome to the Committee. We look forward to your testimony and our question-and-answer period. Your written testimony will be made part of the record in its entirety. You may proceed briefly to outline what you want to tell us.

STATEMENT OF JANET L. YELLEN, CHAIR, BOARD OF GOVERNORS OF THE FEDERAL RESERVE SYSTEM

Ms. YELLEN. Chairman Shelby, Ranking Member Brown, and Members of the Committee, I am pleased to present the Federal Reserve's semiannual *Monetary Policy Report* to the Congress. In my remarks today, I will discuss the current economic situation and outlook before turning to monetary policy.

Since my appearance before the Committee last July, the employment situation in the United States has been improving along many dimensions. The unemployment rate now stands at 5.7 percent, down from just over 6 percent last summer and from 10 percent at its peak in late 2009. The average pace of monthly job gains picked up from about 240,000 per month during the first half of last year to 280,000 per month during the second half, and employment rose 260,000 in January. In addition, long-term unemployment has declined substantially, fewer workers are reporting that they can find only part-time work when they would prefer full-time employment, and the pace of quits—often regarded as a barometer of worker confidence in labor market opportunities—has recovered nearly to its prerecession level. However, the labor force participation rate is lower than most estimates of its trend, and wage growth remains sluggish, suggesting that some cyclical weakness persists. In short, considerable progress has been achieved in the recovery of the labor market, though room for further improvement remains.

At the same time that the labor market situation has improved, domestic spending and production have been increasing at a solid rate. Real gross domestic product is now estimated to have increased at a 3¾ percent annual rate during the second half of last year. While GDP growth is not anticipated to be sustained at that pace, it is expected to be strong enough to result in a further gradual decline in the unemployment rate. Consumer spending has been lifted by the improvement in the labor market as well as by the increase in household purchasing power resulting from the sharp drop in oil prices. However, housing construction continues to lag; activity remains well below levels we judge could be supported in the longer run by population growth and the likely rate of household formation.

Despite the overall improvement in the U.S. economy and the U.S. economic outlook, longer-term interest rates in the United States and other advanced economies have moved down significantly since the middle of last year; the declines have reflected, at least in part, disappointing foreign growth and changes in monetary policy abroad. Another notable development has been the plunge in oil prices. The bulk of this decline appears to reflect increased global supply rather than weaker global demand. While the drop in oil prices will have negative effects on energy producers and will probably result in job losses in this sector, causing hardship for affected workers and their families, it will likely be a significant overall plus, on net, for our economy. Primarily, that boost will arise from U.S. households having the wherewithal to increase their spending on other goods and services as they spend less on gasoline.

Foreign economic developments, however, could pose risks to the U.S. economic outlook. Although the pace of growth abroad appears to have stepped up slightly in the second half of last year, foreign economies are confronting a number of challenges that could restrain economic activity. In China, economic growth could slow more than anticipated as policymakers address financial vulnerabilities and manage the desired transition to less reliance on exports and investment as sources of growth. In the euro area, recovery remains slow, and inflation has fallen to very low levels; although highly accommodative monetary policy should help boost economic growth and inflation there, downside risks to economic activity in the region remain.

The uncertainty surrounding the foreign outlook, however, does not exclusively reflect downside risks. We could see economic activity respond to the policy stimulus now being provided by foreign central banks more strongly than we currently anticipate, and the recent decline in world oil prices could boost overall global economic growth more than we expect.

U.S. inflation continues to run below the Committee's 2-percent objective. In large part, the recent softness in the all-items measure of inflation for personal consumption expenditures reflects the drop in oil prices. Indeed, the PCE price index edged down during the fourth quarter of last year and looks to be on track to register a more significant decline this quarter because of falling consumer energy prices. But core PCE inflation has also slowed since last summer, in part reflecting declines in the prices of many imported items and perhaps also some passthrough of lower energy costs into core consumer prices.

Despite the very low recent readings on actual inflation, inflation expectations as measured in a range of surveys of households and professional forecasters have thus far remained stable. However, inflation compensation, as calculated from the yields of real and nominal Treasury securities, has declined. As best we can tell, the fall in inflation compensation mainly reflects factors other than a reduction in longer-term inflation expectations. The Committee expects inflation to decline further in the near term before rising gradually toward 2 percent over the medium term as the labor market improves further and the transitory effects of lower energy prices and other factors dissipate, but we will continue to monitor inflation developments closely.

I will now turn to monetary policy. The Federal Open Market Committee is committed to policies that promote maximum employment and price stability, consistent with our mandate from the Congress. As my description of economic developments indicated, our economy has made important progress toward the objective of maximum employment, reflecting in part support from the highly accommodative stance of monetary policy in recent years. In light of the cumulative progress toward maximum employment and the substantial improvement in the outlook for labor market conditions—the stated objective of the Committee's recent asset purchase program—the FOMC concluded that program at the end of October.

Even so, the Committee judges that a high degree of policy accommodation remains appropriate to foster further improvement in labor market conditions and to promote a return of inflation toward 2 percent over the medium term. Accordingly, the FOMC has continued to maintain the target range for the Federal funds rate at 0 to ¼ percent and to keep the Federal Reserve's holdings of longer-term securities at their current elevated level to help maintain accommodative financial conditions. The FOMC is also providing forward guidance that offers information about our policy outlook and expectations for the future path of the Federal funds rate. In that regard, the Committee judged, in December and January, that it can be patient in beginning to raise the Federal funds rate. This judgment reflects the fact that inflation continues to run well below the Committee's 2-percent objective and that room for sustainable improvements in labor market conditions still remains.

The FOMC's assessment that it can be patient in beginning to normalize policy means that the Committee considers it unlikely that economic conditions will warrant an increase in the target range for the Federal funds rate for at least the next couple of FOMC meetings. If economic conditions continue to improve, as the Committee anticipates, the Committee will at some point begin considering an increase in the target range for the Federal funds rate on a meeting-by-meeting basis. Before then, the Committee will change its forward guidance. However, it is important to emphasize that a modification of the forward guidance should not be read as indicating that the Committee will necessarily increase the target range in a couple of meetings. Instead the modification should be understood as reflecting the Committee's judgment that conditions have improved to the point where it will soon be the case that a change in the target range could be warranted at any meeting. Provided that labor market conditions continue to improve and further improvement is expected, the Committee anticipates that it will be appropriate to raise the target range for the Federal funds rate when, on the basis of incoming data, the Committee is reasonably confident that inflation will move back over the medium term toward our 2-percent objective.

It continues to be the FOMC's assessment that even after employment and inflation are near levels consistent with our dual mandate, economic conditions may, for some time, warrant keeping the Federal funds rate below levels the Committee views as normal in the longer run. It is possible, for example, that it may be necessary for the Federal funds rate to run temporarily below its normal longer-run level because the residual effects of the financial crisis may continue to weigh on economic activity. As such factors continue to dissipate, we would expect the Federal funds rate to move toward its longer-run normal level. In response to unforeseen developments, the Committee will adjust the target range for the Federal funds rate to best promote the achievement of maximum employment and 2-percent inflation.

Let me now turn to the mechanics of how we intend to normalize the stance and conduct of monetary policy when a decision is eventually made to raise the target range for the Federal funds rate. Last September, the FOMC issued its statement on Policy Normalization Principles and Plans. This statement provides information about the Committee's likely approach to raising short-term interest rates and reducing the Federal Reserve's securities holdings. As is always the case in setting policy, the Committee will determine the timing and pace of policy normalization so as to promote its statutory mandate to foster maximum employment and price stability.

The FOMC intends to adjust the stance of monetary policy during normalization primarily by changing its target range for the Federal funds rate and not by actively managing the Federal Reserve's balance sheet. The Committee is confident that it has the tools it needs to raise short-term interest rates when it becomes appropriate to do so and to maintain reasonable control of the level of short-term interest rates as policy continues to firm thereafter, even though the level of reserves held by depository institutions is likely to diminish only gradually. The primary means of raising the Federal funds rate will be to increase the rate of interest paid on excess reserves. The Committee also will use an overnight reverse repurchase agreement facility and other supplementary tools as needed to help control the Federal funds rate. As economic and financial conditions evolve, the Committee will phaseout these supplementary tools when they are no longer needed.

The Committee intends to reduce its securities holdings in a gradual and predictable manner primarily by ceasing to reinvest repayments of principal from securities held by the Federal Reserve. It is the Committee's intention to hold, in the longer run, no more securities than necessary for the efficient and effective implementation of monetary policy and that these securities be primarily Treasury securities.

In sum, since the July 2014 Monetary Policy Report, there has been important progress toward the FOMC's objective of maximum employment. However, despite this improvement, too many Americans remain unemployed or underemployed, wage growth is still sluggish, and inflation remains well below our longer-run objective. As always, the Federal Reserve remains committed to employing its tools to best promote the attainment of its objectives of maximum employment and price stability.

Thank you. I would be pleased to take your questions.

Chairman SHELBY. Madam Chair, I first would want to get into measures of inflation. You touched on that a little. The Federal Reserve I understand currently uses an inflation measure of core personal consumption expenditures, or PCE, which excludes volatile food and energy prices. Several alternative measures of inflation exist, including one called the "Trimmed Mean PCE," which strips out a larger basket of volatile items from the calculation. I know you know all this.

Do you think that the Federal Open Market Committee should incorporate alternative measures of inflation such as Trimmed Mean PCE? And could you explain to us the risk of not properly gauging inflation expectations?

Ms. YELLEN. Thank you. So let me first say that the Federal Open Market Committee's 2-percent objective refers to the increase, the annual increase in the total PCE price index that includes food and energy. Food and energy are very important components of every household's spending basket, and I do not think it would make a lot of sense or be acceptable to Americans to focus on a measure that strips out these important components of the consumer basket. So we focus on total consumer prices, including food and energy.

But at the same time, we recognize that food and energy are particularly volatile prices, and in order to get a better forecast sometimes of the underlying trend in inflation, we do look at so-called core inflation that strips out these measures.

And in trying to understand trends in inflation and the factors impacting inflation, we look at a broad variety of measures of inflation. Although our formal index is the so-called PCE price index, we look at the CPI, which is well known to most Americans, and also to these Trimmed Mean and other measures that you cited.

Chairman SHELBY. You have opined on the use of monetary policy rules such as the Taylor rule, which would provide the Fed with a systematic way to conduct policy in response to changes in economic conditions. I believe that would also give the public a greater understanding of and perhaps confidence in the Fed's strategy.

You have stated, and I will quote: “Rules of the general sort proposed by Taylor capture well our statutory mandate to promote maximum employment and price stability.”

You have expressed concerns, however, over the effectiveness of such rules in times of economic stress. Would you support the use of a monetary policy rule of the Fed’s choosing if the Fed had discretion to modify it in times of economic disruption?

Ms. YELLEN. I am not a proponent of chaining the Federal Open Market Committee in its decision making to any rule whatsoever. But monetary policy needs to take account of a wide range of factors, some of which are unusual and require special attention, and that is true even outside times of financial crisis.

In his original paper on this topic, John Taylor himself pointed to conditions such as the 1987 stock market crash that would have required a different response. I would say that it is useful for us to consult the recommendations of rules of the Taylor type and others, and we do so routinely, and they are an important input into what ultimately is a decision that requires sound judgment.

Chairman SHELBY. Thank you.

In a recent speech, Richard Fisher, the President of the Dallas Federal Reserve Bank, has suggested a reorganization of the Federal Open Market Committee, specifically advocates for a rotating Vice Chairmanship of the Federal Open Market Committee, as well as a stronger role for regional banks on the Committee.

Do you support any of Mr. Fisher’s proposals? And why, or why not?

Ms. YELLEN. Well, Senator Shelby, I think the current structure of the Federal Open Market Committee and the voting structure was decided on by Congress a long time ago, after weighing a whole variety of considerations about the need for control in Washington and the importance of regional representation.

It is, of course, something that Congress could, if it wished, revisit. But I would say that it has worked very well. We have a broad range of opinion that is represented at the table, and active debates. The decision to appoint the President of the New York Fed as Vice Chair reflected the reality that the New York Fed conducts open market operations on behalf of the system and has special and deep expertise pertaining to financial markets. And I think that has worked well and continues to be true, that there is special expertise in New York.

Chairman SHELBY. A recent article written by two economists for the think tank e21 proposes reducing the number of Federal Reserve districts from 12 to 5 and making the Presidents of all regional banks voting members of the Federal Open Market Committee. The article states that this would preserve regional diversity while giving more authority over monetary policy to Reserve Banks that currently rotate as voting members. It also posits that it could allow for greater safety and soundness and remove the uncertainty created by 19 independent FOMC members.

Do you oppose consolidation of Federal Reserve districts?

Ms. YELLEN. Senator, again, this is a matter for Congress to decide. The structure of the Federal Reserve reflects choices that were hammered out 100 years ago, and I think the current structure works well, so I would not recommend changes. But, again, you know, the Federal Reserve Banks are——

Chairman SHELBY. It is up to Congress, is it not?

Ms. YELLEN. ——play important roles in their communities, but, again, this is up to Congress to consider.

Chairman SHELBY. My last question to you in this round: asset threshold for banks. A recent report by the Office of Financial Research shows a large disparity in systemic risk between the largest banks and those that are smaller and closer to $50 billion in assets. All banks above $50 billion are subject to enhanced prudential regulation regardless of where they fall in this systemic important scale.

Do you think the findings of the OFR, the Office of Financial Research, should be incorporated or considered in the determination of whether a bank is systemically significant?

Ms. YELLEN. Well, Senator, we absolutely recognize in the Federal Reserve that the largest banks and those closer to $50 billion are quite different in terms of their systemic footprint, and we have many different measures that help us decide on the systemic importance of an institution, and there obviously are large differences there.

In Dodd-Frank, Congress gave us the flexibility to tailor our supervision and regulation to make it appropriate to the systemic importance and complexity and size of a bank, and to the maximum extent possible within that legislation, we have tried to use the powers that we have to appropriately tailor our supervision and regulation.

So, for example, we recently proposed extra capital charges on the largest and most systemic institutions and higher leverage requirements, and those requirements would not apply to the smaller institutions. But there are many other examples as well.

Chairman SHELBY. Do you know of any community or regional bank that has caused systemic risk to our economy?

Ms. YELLEN. There may have been episodes in which there were bank failures of smaller banks that did threaten systemic consequences, but certainly it is the largest——

Chairman SHELBY. I believe you chose your words carefully. You said "may have been." Do you know of any yourself and could you furnish any for the record where smaller banks, any of them, or regional banks have caused systemic risk to our economy or to our banking system? Would you furnish that for the record if you do?

Ms. YELLEN. So I will certainly look into it and furnish it. I am trying to agree with you that it is——

Chairman SHELBY. That they do not——

Ms. YELLEN. By and large, that has not been the case.

Chairman SHELBY. Thank you.

Ms. YELLEN. Yes, I agree with that.

Chairman SHELBY. Thank you, Madam Chair.

Senator Brown.

Senator BROWN. Thank you, Mr. Chairman.

I have one comment about your answer to the last question of the Chairman's about capital requirements that you have applied. I think there is no question, as reports have recently made pretty clear, that it has made for stronger banks and a more stable financial system, so thank you. And Senator Vitter on this Committee I know has had special interest, as has Senator Shelby, in strong capital standards. So thank you for that.

Madam Chair, I mentioned in my opening statement that last October you gave a speech on income and wealth inequality. All of us agree the best way to address that is a more robust job-creating economy. What steps are you taking to incorporate your concerns about that into the monetary policy decisions?

Ms. YELLEN. Well, Senator Brown, as you know, we are very committed to both parts of the dual mandate—price stability and maximum employment. We have been running a very accommodative monetary policy in order to promote stronger conditions in the labor market. We have been monitoring a wide variety of indicators of labor market performance, not focusing on any single summary measure, and in particular, for example, the large magnitude of part-time involuntary employment workers who want full-time jobs, the decline in labor force participation, part of which we understand to be or believe to be cyclical, these are things that we are monitoring very closely.

We are also looking at wage growth, and the fact that wage growth has really not picked up very much during this recovery I take to be another signal that, although the labor market is improving, we have further to go, and we want to promote full recovery.

Senator BROWN. Thank you. For much of our Nation's economic history, productivity has tracked wages, but since the 1970s, as you know, this has changed; and productivity has continued, particularly in the last 15 years or so, to grow while wages have not. How do you explain this change? And what are the dangers of wages being uncoupled from productivity?

Ms. YELLEN. Well, we have seen a significant increase in the share of the pie or GDP that accrues to capital as opposed to labor, and that occurs when the growth in inflation-adjusted or real wages fails to mirror the growth in productivity. So that has been occurring now for some time, and we have seen that occur during the recovery.

Real wages tend to rise more rapidly in a strong labor market, so I interpret part of that phenomenon as a signal, a sign that the labor market is not yet fully recovered. But I should also say that there are longer-term structural factors that may also be affecting the shares of the pie that accrue to labor and capital.

I think one of these factors, recent research points to the fact that many labor-intensive activities in the global production chain are being increasingly outsourced, and that phenomenon I think has tended to push down the share of income going to labor as opposed to capital over the last decade or so. There is research on this topic, so I think it is a combination of structural factors, but also remaining cyclical weakness——

Senator BROWN. And that includes the organization of labor, of workers being organized?

Ms. YELLEN. That certainly could include that as a factor.

Senator BROWN. I appreciate the steps that you and your predecessor have made to bring greater transparency to the Fed. As you know, there is a proposal in the House and Senate to go one step further and require the GAO to audit the Fed's monetary policy deliberations. What are your thoughts on that?

Ms. YELLEN. I want to be completely clear that I strongly oppose "audit the Fed." I believe the transparency and providing Congress and the public with adequate information to be able to understand our operations, our financial condition, the conduct of our meeting the responsibilities that Congress has assigned to us is essential. But "audit the Fed" is a bill that would politicize monetary policy, would bring short-term political pressures to bear on the Fed.

In terms of openness about our financial accounts, we are extensively audited. I brought with me this volume which contains an independent outside auditor's—Deloitte & Touche's—audits of our financial statements. So in the normal sense in which people understand what auditing is about, the Federal Reserve is extensively audited. What I think is really critically important is that the Fed be able to deliberate on the best way to meet the responsibilities that Congress has assigned to us, to achieve maximum employment and price stability, and that we be able to do so free of short-term political pressures.

I would remind you that in the early 1970s, when inflation built and became an endemic problem in the U.S. economy, history suggests that there was political pressure on the Fed that interfered with its decision making. It was in the last 1970s that Congress put in place the current feature of law that exempts monetary policy deliberations and decisions, the one area that is exempted from GAO audits. And I really wonder whether or not the Volcker Fed would have had the courage to take the hard decisions that were necessary to bring down inflation and get that finally under control, something I think has been very important to the performance of the U.S. economy, I wonder if that would have happened with GAO reviews in real time of monetary policy decision making.

So central bank independence in conducting monetary policy is considered a best practice for central banks around the world. We are one of many, many central banks that are independent, and academic studies I think establish beyond the shadow of a doubt that independent central banks perform better, the economies are more stable and have better performance in terms of inflation and macroeconomic stability.

Senator BROWN. A last brief question, Madam Chair. You mentioned your Community Advisory Council. What are you doing to encourage regional bank presidents to follow suit?

Ms. YELLEN. Well, regional banks, most of the regional banks are actively involved with their communities. They have community development programs and are really trying to address the special needs of their communities. But in Washington, we also encourage and have oversight of those activities and strongly encourage similar practices.

Senator BROWN. Thank you.

Thank you, Mr. Chairman.

Chairman SHELBY. Senator Crapo.

Senator CRAPO. Thank you, Mr. Chairman, and, Chair Yellen, I would like to use my time going over the EGRPRA process that we are in right now with you.

The first Economic Growth and Regulatory Paperwork Act, or EGRPRA, review submitted to Congress in 2007 states, “Besides reviewing all of our existing regulations in an effort to eliminate unnecessary burdens, the Federal banking agencies work together to minimize burdens resulting from new regulations and current policy statements as they were being adopted.”

I think you know where I am headed here.

The report submitted to Congress specifically discussed consumer financial protection issues, anti-money-laundering issues, and included recently adopted rules. However, included in the *Federal Register* put forward for this current 10-year EGRPRA process that we are now in, where we are supposed to be having our financial regulators by law look for outdated, unnecessary, and unduly burdensome regulatory requirements in the system, there was, I think, a remarkable couple of footnotes included which basically said that the agencies engaged this time around are going to back off. They are basically not going to review new regulations that have gone into effect, not going to review regulations that are currently being considered and will go into effect during the EGRPRA process, and have clarified that the CFPB is not even going to be a part of the process. The entire Consumer Financial Protection Bureau will not be a part of the process.

My question to you is going to be: Would you not agree that we should have a thorough EGRPRA process that reviews all rules and that the Consumer Financial Protection Bureau or the consumer regulatory system should be a part of the EGRPRA process? But before I put that question to you, I would just like to say we had a hearing last week which was dealing with community banks and credit unions and the regulatory burdens that they face. And I asked the witnesses, and every one of them said that in the set of rules and regulations that they feel are creating unnecessary and unduly burdensome pressures are rules and regulations coming from the consumer financial arena, coming from the anti-money-laundering arena, and coming from the Dodd-Frank legislation that is recently enacted which would be exempted from the current agency’s review.

A couple of examples they gave were the qualified mortgage rule that needs to be reviewed, the Volcker rule that needs to be reviewed, and yet all of this is apparently outside the scope of the entire EGRPRA process that the agencies are now undertaking.

Could you respond, please?

Ms. YELLEN. So in the rules that have gone into effect or are in the process under consideration and will go into effect related to Dodd-Frank, we had *Federal Register* notices, took public comment, an important part of designing those rules was considering the costs, the burdens, and what was the most effective and appropriate way of designing regulations to meet Dodd-Frank objectives.

So in a sense, what EGRPRA asks of the agencies is something that we have gone through very recently in the process of designing regulations in some cases that have not yet even gone into effect.

Senator CRAPO. Would your answer be the same for the Consumer Financial Protection Bureau, because it is new that we do not need to review its rules and regulations?

Ms. YELLEN. I really cannot speak to—you know, we do not have that rulemaking authority, and, sir, I cannot speak to what role the CFPB is going to play.

Senator CRAPO. Well, it seems to me—I understand the argument. In fact, that is the argument we got from the regulators who were before us 2 weeks ago in one of our hearings. But it seems to me that that is not what EGRPRA says. EGRPRA does not say, "Let us review the rules and regulations that are old." It says, "Let us review them all." That is what the law was passed to do. And if you look at the Dodd-Frank legislation that you were just saying has recently been through the process, or many of its rules and regulations have recently been through the process, the Dodd-Frank legislation itself was 848 pages long. But the page count of the regulations required by Dodd-Frank has mushroomed to more than 15,000 pages so far, and they are not finished, and over 15 million words of regulatory text. And to say that the fact that they are new and the fact that the implementation process has just recently been completed on them I do not think is a satisfactory response to the requirement of EGRPRA that the agencies need to look at their regulations and identify those that are unnecessary or unduly burdensome.

Ms. YELLEN. Well, we are holding public hearings and will be taking extensive public comments. You mentioned community banks. We are very focused on trying to find ways to reduce the burdens on community banks, and during this process we will be very sensitive to looking for ways in which we can reduce the burden of regulation, and we will be reporting back to you.

Senator CRAPO. Well, thank you. My time is up. But I would just encourage you and the other Federal regulators to focus on the full intent of EGRPRA and expand your review.

Thank you.

Ms. YELLEN. Thank you.

Chairman SHELBY. Senator Reed.

Senator REED. Well, thank you very much, Mr. Chairman, and, Madam Chair, welcome.

The Federal Reserve has significant responsibilities in many areas. One is monetary policy, in which the Federal Reserve exercises a historic, customary independence. But one other area is regulatory policy, actually supervising the operation of large financial institutions, which leads inevitably back to the New York Federal Reserve, which has a great deal of authority, and several of us have had proposals to help, we hope, improve this regulatory oversight, which has been criticized in the past, I mean not only in the run-up to 2007 and 2008, but even recently.

Can you please describe what you have done for greater accountability from the New York Fed?

Ms. YELLEN. So in the aftermath of the hearings that were held here and the allegations that were raised about the New York Fed, we have undertaken an internal review, and that is in process.

Now, I should say that the question that we think is important that was raised there is—let me step back. We have a process for supervising the largest banks that is a systemwide process, involves systemwide committees, and is led by Washington, by the Board.

The Reserve Banks that are involved with the supervision of the institutions in that large bank portfolio take part in the process that is a groupwide and Board-led process. So the question we thought is important for us to look at is: Are we in that process, the Board and the group that supervises these banks and makes decisions, is the relevant information being fed up to the highest decision-making levels, including the Board of Governors? And to the extent that within a Reserve Bank supervision teams there may be divergent opinions, we want to make sure that dissident voices are heard and that dissident views can reach the highest levels for consideration.

So that is the question that we have asked our internal team to look at. The review includes the New York Fed, but also other Reserve Banks that are also involved in large bank supervision, because avoiding group think and making sure that dissident views can be heard at the highest levels is really critical to sound supervision.

We have also asked our Inspector General to undertake his own independent review, and these are in process, and I expect them to be completed this year.

Senator REED. And you anticipate that the Federal Reserve, the Board of Governors, will take specific action which is recognizable and transparent to the Congress and to the people that——

Ms. YELLEN. Yes. I mean, we expect to report to you on the findings of these investigations, and if the need and suggestions for improvement are found, we expect to put those into effect.

Senator REED. At this point do you anticipate that there will be needs to improve? I mean, that is what seems to strike most people when you look at some of the incidents that have taken place over the last several years, that some change has to happen. The question is: Will it be legislative or administrative?

Ms. YELLEN. Well, we will certainly take any administrative changes that appear to be called for. You know, I would like to wait and see what the findings are of the reviews before deciding on the appropriate measures.

Senator REED. Thank you, Madam Chair. My time has expired, but let me put one more issue on the table, and perhaps we could follow up with a question. We are all acutely sensitive to systemic risk, and in Dodd-Frank we tried to minimize that risk by introducing the notion of clearinghouses that would take bilateral transactions, derivatives swaps, et cetera, and put them onto a platform. But that itself introduces a degree of risk in terms of the clearinghouses themselves, and I just want to obviously put on your screen, which I think already is, the sensitivity that we have to continued oversight of these clearinghouses, both our own and others across the globe, because of the potential systemic problem. So can I just put that on the table?

Ms. YELLEN. Absolutely, and I want you to know that I am—we are very attuned to the need to be careful in our supervision that we have taken a step forward, I think, as you mentioned, in moving a great deal of clearing to clearinghouses. Eight financial market utilities, including the most important central counterparties, have been designated by FSOC as systemically important financial market utilities, and they are being supervised by the Federal Reserve, those based in the United States, the Fed, the CFTC, and the SEC.

There are a set of principles that have been put in place and agreed globally for what best practices are in terms of liquidity standards and other risk management standards for these financial market utilities, and it is extremely high priority for us to make sure that we vigorously enforce those standards, and we are in the process of doing so, because although these entities reduce risks that were previously present, they create their own risks if they are not appropriately managed.

So I completely agree, this is important, and we are giving it a great deal of attention.

Senator REED. Thank you very much.

Thank you, Mr. Chairman.

Chairman SHELBY. Senator Corker.

Senator CORKER. Thank you, Mr. Chairman. And, Chair Yellen, thank you for being here today.

There is a push right now to add a provision addressing currency manipulation in the Asian Pacific trade deal. Do you think trade negotiations are an appropriate place for these currency issues? And what if such an effort leads to the inclusion of an international arbitration panel under TPP's enforcement procedures where companies or other Nations could challenge future monetary policy decisions by the Fed?

Ms. YELLEN. So let me first say that I think currency manipulation that is undertaken in order to alter the competitive landscape and give one country an advantage in international trade is inappropriate and needs to be addressed.

But, that said, there are many factors that influence the value of currencies, including differences in economic growth and capital flows, and as you mentioned, monetary policy is a factor that can have an impact on currencies.

So I would really be concerned about a regime that would introduce sanctions for currency manipulation into trade agreements when it could be the case that it would hamper or even hobble monetary policy. Monetary policies we have undertaken, the Federal Reserve has undertaken over the last number of years, having designed for valid domestic objectives of price stability and maximum employment. We have undertaken monetary policy in order to achieve those objectives, and that certainly is not currency manipulation. But monetary policy affects the economy through many channels, perhaps most importantly through interest rates, but monetary policy may have impact on currency values. And so I would see that kind of direction as having the potential to perhaps hamper the conduct of monetary policy or even hobble the conduct of monetary policy. And I would really worry greatly about that approach.

Senator CORKER. So that is a long answer, but the answer I think you just said is you would have a significant problem with that being part of a trade deal. Is that correct?

Ms. YELLEN. Yes, I would.

Senator CORKER. OK. I want to follow the "audit the Fed" questioning a little bit and walk through a series here, and if we could be a little briefer with our answers, that would be good.

The first is with respect to the Fed's lending facilities and the discount window access during the financial crisis. There are legitimate questions about how these facilities were conducted, but to a large extent, Congress addressed this issue by adopting the Sanders amendment to Dodd-Frank. Can you speak to the impact of the Sanders amendment on GAO's ability to audit crisis credit facilities?

Ms. YELLEN. Well, in response to that amendment, the GAO conducted a complete review of the use of our 13(3) emergency lending authorities in all of the programs that were created and conducted an audit that was concluded I believe in mid-2011. In addition, the GAO has the ability to audit open market operations and discount window lending, and we now report regularly all the details—or the details of our open market operations and with a 2-year lag our discount window lending.

Senator CORKER. So those are fully transparent and fully audited now. Is that correct?

Ms. YELLEN. That is correct.

Senator CORKER. The second concern I have heard raised by the "audit the Fed" advocates is the size and composition of the Fed's current $4.5 trillion balance sheet. Does the Fed disclose the types of assets that make up that $4.5 trillion?

Ms. YELLEN. Yes. We have audited financial statements which I have a copy of right here. We report on a security-by-security basis. All of the securities that are in that portfolio, they are reported on the New York Fed's Web site.

Senator CORKER. By CUSIP number, is that correct?

Ms. YELLEN. By CUSIP number. And we have a weekly balance sheet that reports significant details of our balance sheet.

Senator CORKER. So I hate to ask this question, but I have read some quotes lately, and I would just like for you—not by you but by "audit the Fed" advocates. While you may issue an updated balance sheet each week, how do we know those securities actually exist?

Ms. YELLEN. Well, we have an outside accounting firm, an independent auditor, currently Deloitte & Touche, that does a thorough review of our balance sheet, and that is what is contained in our annual report, both the Board and all of the Federal Reserve Banks and the consolidated Federal Reserve System.

Senator CORKER. So they do exist?

Ms. YELLEN. They do exist, Senator.

Senator CORKER. Just my last point. It is obvious to me that the "audit the Fed" effort is to not address auditing the Fed, because the Fed is audited, and every day you publish the CUSIP numbers of the things that you own and the——

Ms. YELLEN. Correct.

Senator CORKER. ——credit facilities that you put in place during an emergency, all of that is audited now. So to me, it is an attempt to allow Congress to be able to put pressure on Fed members relative to monetary policy, and I would just advocate that that would not be a particularly good idea and it would cause us to put off tough decisions for the future, like we currently are doing with budgetary matters. Do you agree with that?

Ms. YELLEN. I strongly agree. As I indicated—well, let me say more generally, I think if you look around the globe in modern times and you consider every country that has gone through a period of chronic high inflation or hyperinflation, what you will find is a central bank that was pressured to print money by——

Senator CORKER. Politicians.

Ms. YELLEN. By politicians who were unable to balance the budget.

Senator CORKER. So I will close. I thank you, Mr. Chairman, for the little extra time. I do think one area that greater transparency could be utilized is in the regulatory area around things like CCAR and others. I think that that is an area where we should focus, and I hope that over the course of the next several months the Fed will work with us in a constructive manner so that we more fully understand how you go about that process. It does seem like a black box now. It is something that I think should be far more transparent, and I hope you will work with us in that regard.

Ms. YELLEN. We would be pleased to do so.

Senator CORKER. Thank you.

Chairman SHELBY. Thank you, Senator Corker.

Senator Schumer.

Senator SCHUMER. Thank you, Mr. Chairman. Thank you, Chair Yellen, for your testimony. Your hard work, your dedication, what I believe is your sound judgment and timely decision making have been a driving force behind the recovery. But I do not envy you your position. You and other members of the FOMC have important decisions to make in the coming months.

Let me urge you to act with caution before raising rates. While there may be data points, positive signs of economic growth, let me be clear. I believe the Fed should remain committed to its current accommodative policy until it sees clear evidence that shows a consistent improvement in wages. In the current environment, wage growth needs to be a major factor, maybe even the lodestar, for the Fed when it is deciding whether to raise rates.

As I have said over and over again, to me the single biggest problem the country faces is the decline of middle-class incomes, and while economic progress has been seen in the past year—strong expectations for growth of GDP, for instance—wage gains have remained sluggish through the recovery. Middle-class Americans have not yet seen the benefits of this growth in their take-home pay, and we all know the statistics of middle-class incomes declining by 6.5 percent over the decade, $3,600 lower than when President Bush took office in 2001.

So I think the Fed must think long and hard before implementing a monetary policy that could reduce demand and hamper the growth of the economy. Wage growth not only serves to benefit middle-class workers who have been asked to do more with less for too long, but placing a priority on consistent wage growth prior to raising rates serves the dual role of fostering a rise in inflation toward the Fed's 2-percent target, one that you have delineated.

Overall growth is rightfully a key factor in the decision, but I firmly believe the Fed should not raise rates until wages are back on a steady trend, steady upward trend.

So as you begin to consider the path toward normalization of rates, I think the Fed must place a priority on seeing consistent real wage growth prior to any decision making. Those who are worried about inflation—you always have to worry about it, but they should look at the last several years. There are few signs of incipient inflation, and, in fact, many economists believe that the chances of deflation are greater than worries of drastic rises in inflation, and concerns of deflation are further precipitated by the prospect of the Fed raising rates too soon.

So I think it is a prudent decision for our broader economy as well as middle-class families across the country to wait until wages really begin to rise.

So, first, do you agree it is critical for the FOMC to see evidence of consistent wage growth prior to deciding to raise interest rates absent indicators that inflation is climbing well above or above the Fed's 2-percent target? And if the FOMC does not wait, what are the potential consequences?

Ms. YELLEN. Well, Senator, our objective is price stability, which we have defined as 2-percent inflation. And as I indicated, before beginning to raise rates, the Committee needs to be reasonably confident that over the medium term inflation will move up toward its 2-percent objective.

I do not want to set down any single criterion that is necessary for that to occur. The Committee does look at wage growth. We have not yet seen—there are perhaps hints, but we have not yet seen any significant pick-up in wage growth. But there are a number of different factors that affect the inflation outlook, and we will be considering carefully a range of evidence that pertains to the inflation outlook and will determine the confidence that we feel in our—we forecast that inflation will move back up to 2 percent. Certainly seeing continued improvement in the labor market adds to that confidence, and it would add to our confidence also that over time wages will pick up. But our objective is 2-percent inflation, and we will look at a wide range of evidence in deciding that.

Senator SCHUMER. Do you feel that the worry of rampant inflation, above 2-percent inflation, is any greater than the worry of deflation given the flatness of wages, 70 percent of the economy is wages, jobs, broadly defined?

Ms. YELLEN. The Committee feels, I think anticipates that inflation is being held down by transitory factors, particularly the decline we have seen in oil prices. We have also had considerable slack in the labor market, and it is diminishing over time. Now wages tend to be a lagging indicator of improvement in the labor market. We have seen improvement, and if we continue to see improvement, it would add to my confidence, especially as the impact of oil prices diminishes over time, that inflation will move back up.

Senator SCHUMER. One final question. Do you see any real evidence of inflation heading above 2 percent right now given——

Ms. YELLEN. I do not see any evidence of that, but inflation—we need to be forward-looking. The Committee is forward-looking in setting monetary policy, and we do see that the labor market is improving, and we are getting closer to our goal of maximum employment.

It is important to remember that monetary policy is highly accommodative. We have held the Federal funds rate at a 0 to ¼ percent range and have a large balance sheet, and these policies have been in place for 6 years now. And we do have an economy that fortunately appears to be recovering, and we do have to be forward-looking in setting monetary policy. But I want to assure you we want to see that recovery continue. We do not feel the labor market is fully healed, and that is a process we want to go on. And we do not want to take policy actions that will hamper that, but monetary policy is very accommodative at the present——

Senator SCHUMER. Thank you. I urge caution.

Chairman SHELBY. Senator Toomey.

Senator TOOMEY. Thank you, Mr. Chairman. And thank you, Madam Chairman, for joining us today.

Let me share a completely opposing point of view from that of the Senator from New York, which will not be a shock to Members of this Committee. I cannot help but observe what strikes me as a very obvious paradox here, and that is the financial and economic crisis is over. It has been over for years, at least 6 or 7 years. And yet we still maintain crisis-level interest rates. We have got no wave of defaults or massive bankruptcies going on. Unemployment has gone from 10 percent to sub-6 percent. GDP growth has been weak. I think that is easily explained by the avalanche of new regulations, certainly not monetary policy, but it has been positive for years. Consumer sentiment is relatively high. The FOMC in January described the economic recovery as solid. Walmart, interestingly, has made an announcement that suggests we might even be approaching NAIRU.

The crisis has been over for a long time. And it is not as though there is no price to be paid by having this unbelievably accommodative policy. Most immediately I see the problem incurred by my constituents, who may have spent a lifetime working hard, sacrificing, saving, forgoing a vacation they might have taken, forgoing a splurge here and there, so that they could save for their retirement and buy a CD, have some money on deposit at a bank, and use that to supplement a modest pension or Social Security payments. Of course, their reward now is they get nothing. Zero. That is what they earned on their savings year after year.

Meanwhile, of course, we have all the risks associated with this: the risk of bubbles forming, I would argue the fixed income markets probably are a huge bubble at the moment. We have the inhibition of price discovery in the financial sector. We facilitate excessive deficits because they look so manageable with zero interest rate environment. Credit is rationed. And what are the benefits of this? The benefits are, at best, a timing shift in economic activity. At best, we are moving economic activity that would otherwise occur in the future closer to the present. As we all know, if artificially low interest rates led to strong economic growth, then everyone around the world would have zero interest rates and everything would be booming. And that is not the case.

So, Madam Chairman, I know you and I disagree on this, but I would just suggest the crisis is clearly long over. I think the time for normalization is well overdue. I hope we get there soon. But I did want to ask you a specific question that is related, and that is, you have said repeatedly that the goal of price stability is 2-percent inflation. Well, certainly there is a congressional mandate on price stability. But when the Fed decides that it is acceptable—in fact, that that is met by savers losing 2 percent of their purchasing power annually—and let me put that a different way. That means a 30-year-old woman who is saving, by the time she retires what she has saved at that point will have lost half of its value. Half of it is gone.

How is that consistent with price stability?

Ms. YELLEN. Well, the Federal Reserve is—the FOMC, in carrying out Congress' mandate, really does have to define how we understand price stability operationally. Two-percent inflation is an inflation rate that we chose largely for two reasons:

First of all, it is well known that price indices that we look at contain upward biases in part because their failure to adequately capture the benefits of new goods and quality improvement. So there are hard-to-measure but nevertheless upward biases in price indices.

And, second of all, because deflation is so dangerous and because an environment of very low inflation and one of comparably extremely low interest rates makes it difficult for monetary policy to respond to adverse shocks, we decided that in order to avoid damaging episodes of deflation, it is wise to have a small buffer that gives greater room for monetary policy to operate.

Senator TOOMEY. Thank you. I am going to run out of time here, so I just want to get to my second question. I would just urge you to consider the impact of savers losing their purchasing power.

Historically, of course, we have changed the level of accommodation through open market activities, typically buying and selling securities to have corresponding changes in the level of cash. You have suggested, if I understand you correctly, that in the process of normalizing, assuming we will get to that process, you intend to achieve that principally by changing the target level of the Fed funds rate.

Ms. YELLEN. Yes.

Senator TOOMEY. And you will do that by increasing the interest on excess reserves.

Ms. YELLEN. Correct.

Senator TOOMEY. And my question is: Since that means over time in a normalizing environment the transfer of tens of billions of dollars from what would go to the taxpayers to big money center banks, why are you doing that instead of simply selling the bonds, which is a more conventional way to operate in the open market operation?

Ms. YELLEN. Well, remember that, first of all, we will be paying banks rates that are comparable to those that they can earn in the marketplace, so those payments do not involve subsidies to banks. And, in addition, remember that we have—in expanding our provision of reserves, we have acquired longer-term assets on the asset side of our balance sheet, and the spread above what we have been paying in terms of interest on excess reserves is quite large. So although that will diminish over time as monetary policy is normalized, the expansion of our balance sheet, even though we are even at present paying 25 basis points interest on reserves, we have had record transfers to the Treasury close to $100 billion this past year and $500 billion since 2009. So there have been large transfers associated with that policy.

Senator TOOMEY. But that situation is likely to reverse if we get into a normalization mode.

Ms. YELLEN. So it is very—it is likely that our transfers to, our remittances to the Treasury will decline as short-term rates rise. We nevertheless expect the remittances to remain positive.

Senator TOOMEY. Thank you, Mr. Chairman.

Chairman SHELBY. Senator Warner—Senator Menendez. I did not know he had come back. Thank you. Sorry.

Senator MENENDEZ. Thank you, Mr. Chairman. I thank my colleague from Virginia.

Madam Chair, thank you for your service. As you know, our economy continues to recover from the damage inflicted by the financial crisis and the Great Recession that followed. GDP is growing. Employers are hiring. Unemployment is falling. So it is only natural that some are starting to look ahead to a time when the Federal Reserve can start withdrawing the monetary stimulus that has been so critical to our recovery.

But in my view, we still face challenges. Most Americans are still waiting for the recovery to show up in meaningful income growth. Long-term unemployment, while down, is still high. Inflation continues to run well below target, as it has now for an extended period of time. So from my perspective, it is critical that the Fed not put the cart before the horse and tighten too soon.

You have said on multiple occasions that the Federal Reserve's timetable for raising rates will depend on the data. There are some who say the Federal Reserve should tighten preemptively based on unemployment or wage growth or at the first hint of inflation, without waiting to find out if it is just a statistical blip.

What would be the risks if the Fed raises rates too soon compared to the risks of waiting?

Ms. YELLEN. Well, if the Fed were to raise rates too soon, Senator, we would risk undermining a recovery that is really just taking hold and is really succeeding, I think, in improving the labor market. As I said, I do not think we are back to attaining yet conditions I would associate with maximum employment or normal labor market conditions. Things have improved notably, but we are not there yet. And so we want to see a healthy recovery continue.

In addition, as you mentioned, inflation is running well below our 2-percent objective, and while we think a significant reason for that is because of transitory factors, most importantly the decline we have seen in energy prices, we are committed to our 2-percent objective. And just as we do not want to overshoot 2 percent on the high side, we do not want to chronically undershoot 2 percent on the low side either.

And so before raising rates, we will want to feel confident that the recovery will continue and that inflation is moving up over time.

There are also, of course, risks of waiting too long to remove accommodation. We have a highly accommodative policy that has been in place for some time. We have to be forward-looking. As the labor market tightens, wage growth and inflation can pick up to the point we would overshoot our inflation objective, and conceivably there could be financial stability risks, and we want to be attentive to those as well.

Senator MENENDEZ. Right.

Ms. YELLEN. So this is a balancing of costs and risks that we are trying to make in a deliberate and thoughtful fashion.

Senator MENENDEZ. Well, I appreciate that, and it is that balance that I hope your wisdom and that of your fellow Board members can get just about right, because I could see entering and choking off recovery before middle-class families actually feel its gains and trapping a too-low inflation or deflation set of circumstances, so I appreciate that.

Let me ask you one other question. I have heard several commentators say that the interest rate increase by the Fed would signal "confidence" to the market about the health of the U.S. economy and have a stimulative effect. Do you agree with that theory? And if so, wouldn't any so-called confident effect be more than offset potentially by a contractionary impact of a rate increase?

Ms. YELLEN. Well, I think it is fair to say that when we begin to raise our target for the Federal funds rate, it will be because we are confident about the recovery and we are reasonably confident that inflation will move back to our 2-percent objective over time. But that confidence will reside in real improvements that we see in the underlying condition of households and businesses where we would not be attempting to somehow boot-strap an improvement in the economy that is purely occurring from a confident effect that comes from our raising rates.

There is reason, I think, to feel good about the economic outlook. Households have gone through major adjustments in their balance sheets and are in better financial condition than they were. The job situation is improving. And even though wages have not been rising in real terms very rapidly, there are more hours of work and more jobs, so household income is improving.

Lower oil prices are boosting household income. Housing prices have rebounded, and that has helped a lot of households, and businesses are in——

Senator MENENDEZ. So, in essence, real confidence, not confidence that is spun.

Ms. YELLEN. That is right. There is no spin here. Our confidence in the economy has improved, and when we raise rates, it will be a signal in our confidence in the underlying fundamentals.

Senator MENENDEZ. Thank you.

Thank you, Mr. Chairman.

Chairman SHELBY. Senator Scott.

Senator SCOTT. Thank you, Mr. Chairman. Chair Yellen, good morning.

Ms. YELLEN. Good morning.

Senator SCOTT. Thank you for being here this morning.

Ms. YELLEN. Thank you.

Senator SCOTT. I would like to change the conversation a little bit and talk about the insurance industry, the SIFIs, and its impact on places like South Carolina where we have about $354 billion of life insurance in place. As we think through the transferring of risk that the insurance industry provides, I think it is a very important consideration. I am a bit prejudiced in this area because I have spent 25 years in the insurance industry, and I appreciate the fact that until the insurance company shows up, the ability to transfer risk is nonexistent. So the importance of how we impact the insurance industry to the Fed I think will reverberate throughout the economy.

I take very specific interest in the impact that the Fed may have on regulating the insurance companies now that have been designated "systemically important" by FSOC, and my thought is that last year, I believe it was, the President signed a law that clarifies the Fed need not impose bank-like capital standards on insurance companies under its supervision. I think this is for very obvious reasons. When you look at the activities of banks, loans and deposits, compared to speaking to the long-term risk that most insurance companies are holding their assets for, it is important to have that delineation and take a very different approach to insurance companies than we do other financial institutions.

I know from experience that this is an important consideration, and I guess my question to you is: What expertise does the Fed have or plan to acquire as it begins to supervise insurance companies? And how closely are you working with State insurance regulators?

Ms. YELLEN. So my answer would be that we have acquired expertise; we have hired individuals who have experience in the insurance industry and are trying to build our expertise there. We consult closely with the NAIC and with State insurance regulators and the Federal Insurance Office. We are gaining experience because we are now in our fourth annual supervision cycle of savings and loan holding companies, many of which are—some of which have significant insurance activities. And, of course, several insurance companies have been designated as SIFIs, and we are supervising those as well.

We are taking the time and doing the work that is necessary to understand their unique characteristics and fully plan to tailor our supervision and capital and liquidity requirements for those insurance companies to make our supervisory regime appropriate. There are very important differences between the risks faced by insurance companies and banking organizations. We have undertaken a quantitative impact study and are actively engaged in working with the firms we will be supervising to understand the unique characteristics of their operations before a promulgating supervision regime.

Senator SCOTT. Thank you. You answered my third question as well, so I will just go to the second question at this point then.

Will the Fed issue an Advanced Notice of Proposed Rulemaking before issuing proposed rules on insurance capital standards then?

Ms. YELLEN. Yes, we will issue proposed rules. We recently issued a proposed rule that pertains to our supervision of GE Capital, and we would do the same with the other firms.

Senator SCOTT. Thank you.

On the issue of stress tests, I know that the Fed is—through the supervision of bank holding companies and other nonbank financial companies, the Fed conducts stress tests to determine how well the entity could withstand different levels of financial distress. The Fed currently has on its balance sheet about $4.5 trillion as a result of the QE program, much larger, of course, than any of the financial entities it regulates. But it appears that nobody is stress-testing the Fed. The proverbial fox is guarding the henhouse, from my perspective.

So my question really is: As you begin to unwind the Fed's massive balance sheet, hopefully in the near future, what assurances can you give this Committee that the Fed will stress-test its own QE exit plan?

Ms. YELLEN. Well, with respect to our balance sheet, let me say that we do stress-test it, and we have issued some reports and papers where we describe what stress tests would look like when there are interest rate shocks that would affect our balance sheet and path of remittances. But it really is important to recognize that the Federal Reserve is not identical to an ordinary banking organization.

First of all, capital plays a very different role in a central bank than it does for a banking organization. Congress and the rules put in place regarding our capital were never intended to make our capital play the same role and it is not necessary for it to play the same role as in a banking organization.

Importantly, unlike a bank, the Federal Reserve's liabilities are mainly reserves to the banking system and currency, and these are not like the runnable deposits of an ordinary banking organization. So the risks that the Federal Reserve faces in our balance sheet are of a different character than those facing an ordinary bank. But, that said, we do look at the likely consequences for our balance sheet of different interest rate scenarios.

Senator SCOTT. Certainly very different scenarios between the Fed and the banks. Without any question, with $4.5 trillion and the way that you wind it down would have—would reverberate throughout the economy in a way that no other financial organization would have impacted. And the path forward is incredibly important to the economy.

Ms. YELLEN. Well, that is one reason that one of the principles of our normalization plans is that we want to wind down our balance sheet in an orderly, gradual, and predictable way. And we have decided to use as our main tool of policy when the time comes for normalization something that is much more familiar both to us and to markets, and that is, variations in short-term interest rates.

You know, of course, an alternative to that would be to say when the time comes to want to tighten monetary policy, we could begin to sell assets. That would be another way of going about doing business. But we have more experience and markets have much more experience with variations in short-term rates, and we want to proceed in that way that is familiar to us, familiar to market participants and the public, and to let our balance sheet play a passive role to gradually diminish in size mainly through ending reinvestment of maturing principal.

Senator SCOTT. Thank you.

Chairman SHELBY. Senator Warner, finally.

Senator WARNER. Thank you, Mr. Chairman, and thank you, Chair Yellen. You are coming down to the home stretch here. I appreciate all your good work and this incredibly important balance to get right as we start down a path of unwinding. But I, like many of my colleagues, share with inflation at such a low rate, trying to get this timing right is so critically important.

One of the things we have talked a lot about, the statute of the U.S. economy, but I want to raise three quick points.

One, after the January FOMC meeting, in your readouts one of the items you mentioned was international developments. Obviously, disruption potentially in Europe, with the ongoing struggles with Greece, China's slowing economy, can you rank—or how will these international developments affect the Fed's decision on timing on monetary policy?

Ms. YELLEN. Well, there are a broad range of international developments that we monitor, and they do affect the performance, the likely performance of the U.S. economy and factor both into our economic forecasts and our assessment of risks.

Growth in Europe has been very slow. Growth in China is slowing. The huge decline we have seen in oil prices has had repercussions all over the global, in some areas positive, very positive, in other areas negative. It affects our outlook, these developments, both through trade flows and through developments in financial markets.

The attempts of many central banks to add monetary policy accommodation is pushing down longer-run interest rates in many parts of the world, and that is, as I mentioned in my testimony, spilling over to the United States. So there are many channels through which these global developments affect the U.S. outlook in ways both positive and negative.

All in all, so factoring all of those things into account, while there are risks—and, again, both positive and negative—stemming from global developments, we still think that the risks for the U.S. outlook are nearly balanced, that we have got sufficiently strong growth in domestic demand and in domestic spending by consumers and businesses, that the recovery looks to be on solid ground. We have just, as I mentioned in my testimony, had a very strong growth in the second half of the year and looking forward and analyzing the factors likely to impact domestic spending, we are seeing perhaps not as strong as we just had but nevertheless above-trend growth, and that really factors into account all of the global considerations——

Senator WARNER. But, obviously, these international factors will affect your decision——

Ms. YELLEN. They do affect our decision, yes.

Senator WARNER. I also want to associate my comments with Senator Corker's comments about I would like to make sure that we deal in a perfect world with currency manipulation, but currency manipulation to one could appear as monetary policy to another.

Ms. YELLEN. Yes.

Senator WARNER. And as we have seen Japan and Europe move toward more monetary easing, obviously one of the effects of that has been strengthening of the dollar and it hurts our exports. Speak to that for a moment, and if you could, let me get a last 30 seconds in at the end, so if you could take——

Ms. YELLEN. You bet. So, you know, I think we should be on guard against currency manipulation. The G7 in international fora have agreed, and I know our administration in dealing with foreign countries really tries to crack down on currency manipulation.

Nevertheless, I think certainly it is a principle agreed in the G7 that monetary policy oriented toward domestic goals like price stability or, in our case, price stability and maximum employment, this is a very valid use of a domestic tool for a domestic purpose.

It is true that the use of that tool can have repercussions on exchanges, but I really think it is not right to call that "currency manipulation" and to put it in the same bucket as interventions in the exchange markets that are really geared toward changing the competitive landscape to the advantage of a country.

Senator WARNER. Mr. Chairman, I would just in my last couple of seconds want to make the point that one of the things that has been absent from this discussion today has been—we have talked a lot about your work. We have not talked as much about our work and need to still address our own fiscal policies. I would simply point out that because of the extraordinary remittances from the Fed's expanded balance sheet, we have seen north of $420 billion in net additional revenue that has diminished our deficit. But that is not something that can be projected on into the future. And as we talk about the times of raising interest rates and trying to get back to a normalized effort, I would simply point out again, you know, a 100-basis-point increase in interest rates adds $120 billion a year on debt service.

Ms. YELLEN. Yes.

Senator WARNER. And even CBO projections at this point will show that debt service with our current $18 trillion in debt will exceed total defense spending or total domestic discretionary spending in 10 years, and that is not a good business plan for our country.

Ms. YELLEN. All absolutely true.

Senator WARNER. Thank you, Mr. Chairman.

Chairman SHELBY. Senator Warren.

Senator WARREN. Thank you, Mr. Chairman. Thank you for being here, Chair Yellen.

You know, as you know, Wall Street banks could profit handsomely if they knew about the Fed's plans before the rest of the market found out, and that is why any leak of confidential information from the Fed results in serious penalties for the people who are responsible.

But apparently there have been no consequences for the most recent leak. According to public reports, Scott Alvarez, the General Counsel of the Fed, was put in charge of investigating a leak from the September 2012 meeting of the Federal Open Market Committee. Nearly 2½ years later, the results of this investigation have not been made public, and no action has been taken.

On February 5th, Congressman Cummings and I sent a letter to Mr. Alvarez requesting a briefing from him in advance of your appearance here today, but so far we have not received one.

Can you assure us that the Congressman and I will get a briefing soon?

Ms. YELLEN. So if I might say by way of background——

Senator WARREN. I just need a yes or no——

Ms. YELLEN. ——the answer is——

Senator WARREN. I just want to be able to get a briefing on what has happened that it has been 2½ years and there has been no public report about what happened from a significant——

Ms. YELLEN. We are trying to work with your staff on a process to be responsive.

Senator WARREN. I will take that as a yes?

Ms. YELLEN. Yes.

Senator WARREN. OK. Thank you.

As you know, this past December, House Republicans successfully blew a hole in Dodd-Frank protections by tacking the repeal of the swaps pushout rule to a must-pass Government spending bill. That repeal, which was written by Citigroup lobbyists, will allow the biggest banks in the country to continue to receive taxpayer protection for some of their riskiest derivatives and swaps.

Now, a month before the repeal, Mr. Alvarez spoke at a conference at the American Bar Association, an organization that includes many lawyers who represent the banks that are affected by the Fed's enforcement of Dodd-Frank. Mr. Alvarez openly criticized the swaps pushout rule, saying, "You can tell it was written at 2:30 in the morning, and so it needs to be, I think, revisited just to make sense of it."

Mr. Alvarez also criticized the new rules Dodd-Frank put into place to address conflicts of interest at credit rating agencies, saying, "Restrictions on the agencies really did not work, and it does not work, and it is more constraining than I think is helpful."

So let me start by asking: Does Mr. Alvarez's criticism of these two rules reflect your view or the view of the Federal Board of Governors?

Ms. YELLEN. So let me just say that over the years we have had feedback that we have given on various aspects of Dodd-Frank, but we are——

Senator WARREN. I appreciate that, Chair. The question I am asking, though, is these are specific criticisms he has made of Dodd-Frank rules that govern the largest financial institutions in this country, and I am just asking: Do his criticisms reflect your criticisms or the criticisms of the Federal Board?

Ms. YELLEN. I think we—I personally and the Board consider Dodd-Frank to be a very important piece of legislation that has provided a road map for us to put in place regulations——

Senator WARREN. I appreciate that, Madam Chairman, but I just need a yes or no here. Do his criticisms reflect your criticisms?

Ms. YELLEN. I am certainly not seeking in any way to alter Dodd-Frank at this time. It is a framework that is——

Senator WARREN. Well, then, let me ask the question differently. Do you think it is appropriate that Mr. Alvarez took public positions that do not evidently reflect the public position of the Fed's Board, especially before an audience that has a direct financial interest in how the Fed enforces its rules?

Ms. YELLEN. Well, I think the Fed's position and my position is that we are able to work very constructively within the framework of Dodd-Frank to tailor rules that are appropriate for the institutions we supervise, and we are not seeking to change the——

Senator WARREN. I appreciate that. You know, we know that the Fed staff plays a critical role in shaping Dodd-Frank rules and enforcing them. In the case of the swaps pushout, Congress passed the law in 2010, but the Fed and the OCC delayed the effective date of the rule until 2016, giving Citigroup and other big banks time to get the rule repealed before it ever went into effect.

Did Mr. Alvarez provide input into the Fed's decision to delay the effective date of the pushout rule?

Ms. YELLEN. I do not know. I mean, we usually have phase-ins for complicated rules that require adjustments by financial firms. This has been true of all of the Dodd-Frank rules that we have put into effect.

Senator WARREN. Well, I think this might be worth looking into. You know, the Fed is our first line of defense against another financial crisis, and the Fed's General Counsel or anyone at the Fed staff should not be picking and choosing which rules to enforce based on their personal views. So I urge you to carefully review this issue and to assess whether the leadership of the Fed staff is on the same page as the Federal Reserve Board.

Thank you, Mr. Chairman.

Chairman SHELBY. Thank you.

Senator Heitkamp.

Senator HEITKAMP. Mr. Chairman, thank you. Always last, hopefully not least.

Chair Yellen, I want to first thank you for your patience and your responsiveness, and I was tempted to ask one question, which was your definition of "patience." But I will not do that today.

Instead, I want to look to the future. I think Senator Warner really outlined one of the concerns that I have. We always seem to be fighting the last economic war in the U.S. Congress. You are a very astute and very respected student of the American economy. It is what you do every day. I am going to give you a chance—you have heard a lot of opinions and received a lot of advice from this panel. I am going to give you a chance to give us some advice.

When you look at leading and lagging indicators, especially leading indicators, what troubles you and what keeps you awake at night about the American economy in the next 10 to 15 years? And what advice would you give to the U.S. Congress in addressing those concerns that you have looking right now at those indicators?

Ms. YELLEN. Well, I have said on a number of occasions that the rise we have see in inequality in the United States is a great concern to me.

Senator HEITKAMP. We discussed this the last time you were here, and you offered no solutions toward that problem, you might recall.

Ms. YELLEN. I think there are a variety of different things that the Congress could consider in policy measures that might be appropriate, but this really is a domain for Congress to consider. So that is one of the concerns that I have.

Senator HEITKAMP. So no advice on the earned income tax credit or on tax rates or——

Ms. YELLEN. I am not going to weigh in on things that really are in your domain to evaluate. So I think that is important, and I would say something also in Congress' domain is longer-run issues with the Federal budget. I think Congress has made painful decisions that have now really stabilized, brought down the deficit very substantially and stabilized for a number of years the debt-to-GDP ratio. But eventually debt-to-GDP will begin to rise and deficits will increase again as the population ages and Medicare, Medicaid, and Social Security get to be a larger share of GDP under current programs. And there are a lot of ways in which—these are problems we have known about for a long time.

I also worry that if we were to again be hit by an adverse shock, there is not much scope to use fiscal policy. It was used in the early years after the financial crisis. We ran large deficits. But in the course of doing that, debt-to-GDP rose, and were another negative shock to come along, it is questionable how much scope we would now have to put in place even on an temporary, multiyear basis expansionary fiscal policy. And I think it is important to deal with these issues, for the Congress to do so.

Senator HEITKAMP. But your concern about scope does not lead you to believe that interest rates should be adjusted at this point to give you the flexibility to use interest rates should we receive another shock?

Ms. YELLEN. Well, the Fed would, of course, use the tools that we have to try to achieve domestic ends, but I think having fiscal policy be available as a tool is important as well.

Senator HEITKAMP. If we look today at the American economy and some of the challenges—and you and I have spoken privately about this—of the millennials and saving patterns and consumptive patterns, the shared economy, what concerns you about the now 8 years of changed behavior in consumption? What concerns you about those issues? And do you see those changing long-term consumptive patterns that may present some interesting challenges for the American economy?

Ms. YELLEN. Well, I think we are just beginning to understand how the millennials are behaving. They are certainly waiting longer to buy houses, to get married. They have a lot of student debt. They seem, you know, quite worried about housing as an investment. They have had a tough time in the job market. And, as the economy strengthens, I expect more of them to form households of their own and buy homes. But we have yet to really see how this is going to affect that generation.

Senator HEITKAMP. Or they may have experienced a change in consumptive patterns that will present some unique challenges, whether it is sharing automobiles, whether it is, in fact, not buying homes, doing the things that they have now done to accommodate their economic challenges in the long term. And I think that one of the things that we need to do much more carefully here in the U.S. Congress is begin to look at not just having a discussion with you about monetary policy, but looking at fiscal policy, whether it is tax reform or whether it is, in fact, taking a look at what we are doing with the mortgage market, to begin to develop an economy that the millennials will fully participate in. And I hope you continue to think and provide us the advice that is extraordinarily valuable.

Thank you.

Ms. YELLEN. Thank you.

Chairman SHELBY. Senator Donnelly.

Senator DONNELLY. Thank you, Mr. Chairman. And, Madam Chair, thanks for your service. And I apologize. I have had to go in and out of some other committees, and I know this subject has been brought up, but the issue of wage stagnation that we have seen and the other piece of student debt.

When we look at the student debt and the numbers are so high and, you know, it has been a long time, but when I graduated from college, you could basically work an entire summer and wind up paying off about half what your tuition was.

How big a drag—and you may not have an exact measurement, but one of my great concerns has been in some areas of the country, how do you buildup the housing market when the young people who want to buy a house—the money that I saved up for, at that time, that 20-percent downpayment is now in many cases being used to pay off a student loan, and it is a box you almost can never get out of. So how big a drag do you see that being on the economy?

Ms. YELLEN. So it is a little bit hard to tell. I mean, the housing market has not recovered in the way that I would have anticipated. It has been very slowly improving, but household formation has been extremely low in the United States. It is hard to tell. You have many young people who are living with their families still. It is hard to tell whether that is because of student debt or because of a weak job market.

My guess is that as the economy continues to improve, we will see an improvement in household formation, that we will see—now, many young people may decide that they prefer to rent rather than buy homes. But that will give rise to a boost to multifamily construction, even if not so much to single-family construction. But the housing market has been very depressed. Nevertheless, in spite of that, the economy as a whole and the job market has had sufficient strength to recover.

Senator DONNELLY. My other concern in that area is when you see a young person who looks up and is dealing with $100,000 in student debt and they have this big chunk of money that goes off every month to pay that down, those dollars are dollars that are never used to go to a restaurant, never used to maybe buy a car, never used to travel somewhere. And so overall job-wise I think it hits or seems to hit—makes it more difficult in all those areas to continue job creation.

Ms. YELLEN. It is true, but it also remains true that a higher education boosts income and is tremendously important. It is not always the case, not for every individual, that it is a good investment, but certainly on average, it has been a very important and worthwhile investment. So I think to my mind that is the other side of it.

Senator DONNELLY. I completely agree what a wonderful investment it is. I just want to try to make sure that we can get that wonderful opportunity without basically saddling yourself for years and years as you look ahead.

Ms. YELLEN. The debt loads are very large and have really increased a great deal. You are——

Senator DONNELLY. One other area I wanted to ask you about is cybersecurity, and I know that the Fed has certain things they focus on on a constant basis. In the area of cybersecurity, though, it is, from all the financial organizations I talk to, one of the biggest concerns they have, for the companies it is. How big a risk do you see that in the years moving forward? And how big an effect on the financial institutions do you see this being?

Ms. YELLEN. Well, I think it is at the top of the list of concerns that we have about the financial system, about the problems facing financial organizations, and I would include the Federal Reserve in that, too. It is a top concern of our own given the importance of our own systems to the payment—the functioning of the payment system of the U.S. and global economy.

Internally, we are paying a great deal of attention to make sure that we are addressing ever escalating threats to our own operations. The banks that we supervise, we are very attentive and have experts who work with those banks to make sure that they are attentive. It is a larger problem, and this is one where cooperation is needed among card systems, retailers, and others involved in the financial system, and conceivably, legislation might be needed in this area.

Senator DONNELLY. Thank you, and I will conclude with this: For the State I represent, Indiana, we for many years were hit very, very hard in the manufacturing sector because of currency manipulation, among many other areas. And I know this has been mentioned, but I would like to make sure that you keep a close eye on this, because when we talk about manufacturing, the ability to be competitive—and all that was ever said to me by our manufacturers was, “If it is a fair field, we will do fine. But if the game is rigged, I do not know how we win that kind of game.”

And I have always, you know, had the same feeling—and my Ranking Member, Sherrod Brown, right next to me in Ohio, has dealt with this a lot with his manufacturers as well—that if currencies are fairly valued and we are not successful, our manufacturers, they have always said to me, “If I cannot win a fair game, that is on me. But if I wind up in a situation where it is being manipulated against my company, it makes it awful tough to keep those workers working and to keep our economy growing.”

So I would just ask that you keep that in mind as you move forward, and thank you so much for your service.

Ms. YELLEN. Thank you.

Chairman SHELBY. Madam Chair, you mentioned that the current unemployment is listed at 5.7 percent. However, one alternative measure that seems to fully capture a better sense of labor force participation is the U6 measure that lists total unemployed and underemployed at 11.3 percent as of January 2015. This measure has not dipped below 10-percent unemployment since before the crisis. According to the Bureau of Labor Statistics data, there are now 12 million more Americans no longer participating in the workforce than in January 2009.

Do you agree that the unemployment number that you cited, 5.7 percent, in your opening statement paints a rosy or a better picture of the true unemployment rate that I just cited?

Ms. YELLEN. So, Senator, the U6 is a broader measure of unemployment. It includes marginally attached and discouraged workers and also an unusually large number of individuals who are working part-time who would like full-time jobs. So it is a much broader indicator of underemployment or unemployment in the U.S. economy, and while it has come down—it was 12.1 percent a year ago. It has come down from there to 11.3 percent. It definitely shows a less rosy picture than U3 or the 5.7-percent number. And I did mention that we do not at this point, in spite of the fact the unemployment rate has come down, feel that we have achieved so-called maximum employment, in part for these very reasons. Labor force participation has come down, has been trending down. That is something that will continue for demographic reasons. I do not expect it to move up over time, but I do think a portion of the depressed labor force participation does reflect cyclical weakness in that in a stronger job market more people would enter.

Chairman SHELBY. But you basically concede that 11.3 percent of underemployed people, that is not good in this country, is it?

Ms. YELLEN. That is an abnormally high level, and it signifies weakness that would be good to address.

Chairman SHELBY. The Financial Stability Board, FSB, plays an important role, as you well know, in implementing financial reforms, including completion of a capital framework that you alluded to for banks. The Federal Reserve is a member of this FSB, the Financial Stability Board. Given that the Financial Stability Board is not accountable to Congress or to any branch of the U.S. Government, to my knowledge, where do these Financial Stability Board reforms fit in the U.S. regulatory system? My question is: Does the Federal Reserve treat them as mandated directives or suggestions or what? And what statutory basis does the Fed have to implement the Financial Stability Board's reforms verbatim? Do you think further that the FSB decisions are important enough that they should be fully vetted by the FSOC before implemented in the U.S.?

Ms. YELLEN. Well, a number of——

Chairman SHELBY. That is two or three questions, but they are all tied together.

Ms. YELLEN. So a number of U.S. regulatory agencies participate in the FSB, including the administration and other regulators.

Chairman SHELBY. Sure.

Ms. YELLEN. Nothing that is decided in the FSB has effect in the United States unless the relevant agencies propose rules and those are publicly vetted through the normal public comment process and our rulemaking process. So those recommendations have no force in the United States unless we go through a rulemaking process. But there is a good reason for us to participate in these international fora. Financial markets are global. If we take actions to stiffen supervision and regulation in the United States, and other major financial centers do not act in similar ways, we will just see activity move out of our borders to other parts of the world, and I do not think that will make for a safer global financial system.

So we do want to be part of international discussions that lead all countries to work harmoniously together to try to raise standards and maintain a level playing field, and that explains why we participate. And we can play and I think we do play a leadership role in this organization——

Chairman SHELBY. But you do not need to accept that their recommendations are verbatim, do you?

Ms. YELLEN. No, we do not, and often we have put in place tougher standards than came out of those fora.

Chairman SHELBY. Thank you.

The *Wall Street Journal* recently reported that the Federal Reserve surcharge for the largest banks is hurting U.S. banks because it is not on par with what foreign regulators are applying to foreign banks. The article also indicated that the Fed's proposal is going beyond an international standard, roughly doubling the surcharge for big U.S. banks.

We all want our banks well capitalized. I think that is very important. But does the Fed's proposal indicate its belief that foreign banks are not adequately capitalized? That has been said before, you know, that when they have stress tests, they are in deep stress, as we well know, probably a lot more than our banks are.

Ms. YELLEN. Well, our proposal embodies our own analysis of the costs to our economy and our financial system of possible distress at the largest and most systemic organizations. We chose to propose surcharges, capital surcharges, that rose above the level that were agreed internationally because we think this will make our financial system safer.

There are other jurisdictions that have similarly put in effect a super equivalent regime. Switzerland is an example of that, and there are other countries that have gone a similar route. The proposal is out for comment, and we look forward to seeing what others say. But we do think it is important for the most systemic institutions whose distress could lead to significant financial impact on the United States, we do think it is important for them to hold appropriate capital, and especially when in times of stress it is a competitive advantage and not a disadvantage for those firms.

Chairman SHELBY. Madam Chair, some of the large foreign banks that do business in the U.S., do you hold them to the same capital standards that you do our banks? And if not, why not?

Ms. YELLEN. Well, we have just put in place a rule pertaining to foreign banking organizations that would ask them, if they are sufficiently large, require them to form intermediate holding companies that would contain their activities in the United States. And that is a way to subject them to the same capital and liquidity standards as U.S. firms doing business in our markets.

Chairman SHELBY. But shouldn't the standard—in other words, the foreign banks, as I understand what you are saying, they should not have an advantage with lower capital standards than our banks when they are doing business in this country.

Ms. YELLEN. Well, to the extent that they are doing business in this country, we are going to subject them to the same standards as our banking organizations.

Chairman SHELBY. Thank you.

Senator Brown.

Senator BROWN. Thank you, Mr. Chairman. Just a comment, then a couple of questions, and this side will wrap up.

I understand, Madam Chair, your reluctance to weigh in on specific policy issues that are the province of the Congress, such as the earned income tax credit. I appreciate your bringing attention to those issues by which taxpayers/workers will benefit from the EITC.

Trade, of course, is another one of those matters, and your predecessor had labeled currency manipulation "an effective subsidy," his words. Ohio manufacturers, similar to Indiana manufacturers that Senator Donnelly mentioned, must compete against foreign competitors who are subsidized. I agree with your statement that this needs to be addressed.

Two questions—first, about living wills. The FDIC last summer seemed positioned to declare the living wills of some of the Nation's largest banks not sufficient. Instead, though, the FDIC stepped back, and together you and the FDIC asked for resubmissions in July. Two questions, a couple questions. A two-part question: Are you prepared to declare living wills submitted during this next round of submissions not credible if, in fact, they are not? And what actions will you take if the living wills are actually deemed insufficient?

Ms. YELLEN. So we have worked, as you mentioned, closely with the FDIC to give guidance to the largest firms on what we want to see, what changes we want to see in their living wills in order to improve their resolvability. There are significant changes that we have asked for. Some pertain to their legal structure: the ability of critical operations that support an entire organization to remain available to the firm in a situation of distress, to simplify and make sure that they have a holding company structure that would be functional, to promote an orderly bankruptcy.

We agreed with the FDIC on what we want to see. We are working with the firms to make sure they understand what we expect. We expect to see resubmissions of these plans by July of 2015, July of this year, and we have not——

Senator BROWN. Let me interrupt there. Are you willing to—are you unwilling to accept any of these banks saying that "you have not given us enough information on what to do to comply by July"? Are you unwilling—will you say, "We will not accept that answer"?

Ms. YELLEN. I feel we have given detailed feedback and adequate information, and if we do not see the progress we expect, we are fully prepared to declare the living wills to be not credible.

Senator BROWN. OK. That is good to hear. One last question, Mr. Chairman.

Earlier this month, the major story broke about a trove of HSBC account holder data that reveals that their Swiss banking arm collaborated in efforts by some of its account holders to engage in tax evasion. On February 10th, I asked Ms. Hunter what steps her agency, the Fed, your agency, had taken with regard to these allegations. I gather that investigations of some individual U.S. account holders have been undertaken by IRS. Last week, Geneva prosecutors raided the private bank offices of HSBC as part of a new money-laundering investigation. We know HSBC has a history of major U.S. sanctions, major money-laundering violations. They now face major new charges of facilitating tax evasion.

I know you may be unable to address details of an ongoing investigation, but summarize for this Committee, if you would, Madam Chair, what the Fed would normally do to pursue allegations like these regarding tax evasions by a major financial institution, how long you would expect an investigation to take—again, not specifically here if you are unwilling or unable to share that, but how you would normally do it, how long it takes, what steps you normally take with other Federal officials, with other countries' regulators?

Ms. YELLEN. Well, we would have some responsibility for this if it affected the operations of a bank in the United States. In this case, the information has been provided to the Justice Department. The Justice Department has primary enforcement responsibilities related to U.S. tax laws along with the IRS. And the Justice Department normally cooperates with us and provides information to us if they think that we would have jurisdiction if banking laws have been violated in the United States and that we should take action. In this case, the Justice Department has not provided us with information.

Senator BROWN. Do you ask them, or must they make the first move?

Ms. YELLEN. Well, we have not been privy to any of this information, and if they thought it appropriate, we would expect them to reach out to us.

Senator BROWN. Don't news reports suggest that there is no harm but perhaps reason for you to ask the Justice Department for some of this, any of this information that they might think important to this country's financial system and to these banks and to you?

Ms. YELLEN. Well, this is pretty recent news reports that we have learned about this.

Senator BROWN. OK.

Chairman SHELBY. Madam Chair, thank you for appearing again before the Committee. We look forward to further appearances, and this will conclude the hearing. Thank you.

The Committee is adjourned.

[Whereupon, at 12:17 p.m., the hearing was adjourned.]

[Prepared statements, responses to written questions, and additional material supplied for the record follow:]

PREPARED STATEMENT OF JANET L. YELLEN

CHAIR, BOARD OF GOVERNORS OF THE FEDERAL RESERVE SYSTEM

FEBRUARY 24, 2015

Chairman Shelby, Ranking Member Brown, and Members of the Committee, I am pleased to present the Federal Reserve's semiannual *Monetary Policy Report* to the Congress. In my remarks today, I will discuss the current economic situation and outlook before turning to monetary policy.

Current Economic Situation and Outlook

Since my appearance before this Committee last July, the employment situation in the United States has been improving along many dimensions. The unemployment rate now stands at 5.7 percent, down from just over 6 percent last summer and from 10 percent at its peak in late 2009. The average pace of monthly job gains picked up from about 240,000 per month during the first half of last year to 280,000 per month during the second half, and employment rose 260,000 in January. In addition, long-term unemployment has declined substantially, fewer workers are reporting that they can find only part-time work when they would prefer full-time employment, and the pace of quits—often regarded as a barometer of worker confidence in labor market opportunities—has recovered nearly to its prerecession level. However, the labor force participation rate is lower than most estimates of its trend, and wage growth remains sluggish, suggesting that some cyclical weakness persists. In short, considerable progress has been achieved in the recovery of the labor market, though room for further improvement remains.

At the same time that the labor market situation has improved, domestic spending and production have been increasing at a solid rate. Real gross domestic product (GDP) is now estimated to have increased at a 3¾-percent annual rate during the second half of last year. While GDP growth is not anticipated to be sustained at that pace, it is expected to be strong enough to result in a further gradual decline in the unemployment rate. Consumer spending has been lifted by the improvement in the labor market as well as by the increase in household purchasing power resulting from the sharp drop in oil prices. However, housing construction continues to lag; activity remains well below levels we judge could be supported in the longer run by population growth and the likely rate of household formation.

Despite the overall improvement in the U.S. economy and the U.S. economic outlook, longer-term interest rates in the United States and other advanced economies have moved down significantly since the middle of last year; the declines have reflected, at least in part, disappointing foreign growth and changes in monetary policy abroad. Another notable development has been the plunge in oil prices. The bulk of this decline appears to reflect increased global supply rather than weaker global demand. While the drop in oil prices will have negative effects on energy producers and will probably result in job losses in this sector, causing hardship for affected workers and their families, it will likely be a significant overall plus, on net, for our economy. Primarily, that boost will arise from U.S. households having the wherewithal to increase their spending on other goods and services as they spend less on gasoline.

Foreign economic developments, however, could pose risks to the outlook for U.S. economic growth. Although the pace of growth abroad appears to have stepped up slightly in the second half of last year, foreign economies are confronting a number of challenges that could restrain economic activity. In China, economic growth could slow more than anticipated as policymakers address financial vulnerabilities and manage the desired transition to less reliance on exports and investment as sources of growth. In the euro area, recovery remains slow, and inflation has fallen to very low levels; although highly accommodative monetary policy should help boost economic growth and inflation there, downside risks to economic activity in the region remain. The uncertainty surrounding the foreign outlook, however, does not exclusively reflect downside risks. We could see economic activity respond to the policy stimulus now being provided by foreign central banks more strongly than we currently anticipate, and the recent decline in world oil prices could boost overall global economic growth more than we expect.

U.S. inflation continues to run below the Committee's 2-percent objective. In large part, the recent softness in the all-items measure of inflation for personal consumption expenditures (PCE) reflects the drop in oil prices. Indeed, the PCE price index edged down during the fourth quarter of last year and looks to be on track to register a more significant decline this quarter because of falling consumer energy prices. But core PCE inflation has also slowed since last summer, in part reflecting declines in the prices of many imported items and perhaps also some pass-through of lower energy costs into core consumer prices.

Despite the very low recent readings on actual inflation, inflation expectations as measured in a range of surveys of households and professional forecasters have thus far remained stable. However, inflation compensation, as calculated from the yields of real and nominal Treasury securities, has declined. As best we can tell, the fall in inflation compensation mainly reflects factors other than a reduction in longer-term inflation expectations. The Committee expects inflation to decline further in the near term before rising gradually toward 2 percent over the medium term as the labor market improves further and the transitory effects of lower energy prices and other factors dissipate, but we will continue to monitor inflation developments closely.

Monetary Policy

I will now turn to monetary policy. The Federal Open Market Committee (FOMC) is committed to policies that promote maximum employment and price stability, consistent with our mandate from the Congress. As my description of economic developments indicated, our economy has made important progress toward the objective of maximum employment, reflecting in part support from the highly accommodative stance of monetary policy in recent years. In light of the cumulative progress toward maximum employment and the substantial improvement in the outlook for labor market conditions—the stated objective of the Committee's recent asset purchase program—the FOMC concluded that program at the end of October.

Even so, the Committee judges that a high degree of policy accommodation remains appropriate to foster further improvement in labor market conditions and to promote a return of inflation toward 2 percent over the medium term. Accordingly, the FOMC has continued to maintain the target range for the Federal funds rate at 0 to ¼ percent and to keep the Federal Reserve's holdings of longer-term securities at their current elevated level to help maintain accommodative financial conditions. The FOMC is also providing forward guidance that offers information about our policy outlook and expectations for the future path of the Federal funds rate. In that regard, the Committee judged, in December and January, that it can be patient in beginning to raise the Federal funds rate. This judgment reflects the fact that inflation continues to run well below the Committee's 2-percent objective, and that room for sustainable improvements in labor market conditions still remains.

The FOMC's assessment that it can be patient in beginning to normalize policy means that the Committee considers it unlikely that economic conditions will warrant an increase in the target range for the Federal funds rate for at least the next couple of FOMC meetings. If economic conditions continue to improve, as the Committee anticipates, the Committee will at some point begin considering an increase in the target range for the Federal funds rate on a meeting-by-meeting basis. Before then, the Committee will change its forward guidance. However, it is important to emphasize that a modification of the forward guidance should not be read as indicating that the Committee will necessarily increase the target range in a couple of meetings. Instead the modification should be understood as reflecting the Committee's judgment that conditions have improved to the point where it will soon be the case that a change in the target range could be warranted at any meeting. Provided that labor market conditions continue to improve and further improvement is expected, the Committee anticipates that it will be appropriate to raise the target range for the Federal funds rate when, on the basis of incoming data, the Committee is reasonably confident that inflation will move back over the medium term toward our 2-percent objective.

It continues to be the FOMC's assessment that even after employment and inflation are near levels consistent with our dual mandate, economic conditions may, for some time, warrant keeping the Federal funds rate below levels the Committee views as normal in the longer run. It is possible, for example, that it may be necessary for the Federal funds rate to run temporarily below its normal longer-run level because the residual effects of the financial crisis may continue to weigh on economic activity. As such factors continue to dissipate, we would expect the Federal funds rate to move toward its longer-run normal level. In response to unforeseen developments, the Committee will adjust the target range for the Federal funds rate to best promote the achievement of maximum employment and 2-percent inflation.

Policy Normalization

Let me now turn to the mechanics of how we intend to normalize the stance and conduct of monetary policy when a decision is eventually made to raise the target range for the Federal funds rate. Last September, the FOMC issued its statement on Policy Normalization Principles and Plans. This statement provides information about the Committee's likely approach to raising short-term interest rates and reducing the Federal Reserve's securities holdings. As is always the case in setting policy, the Committee will determine the timing and pace of policy normalization so as to promote its statutory mandate to foster maximum employment and price stability.

The FOMC intends to adjust the stance of monetary policy during normalization primarily by changing its target range for the Federal funds rate and not by actively managing the Federal Reserve's balance sheet. The Committee is confident that it has the tools it needs to raise short-term interest rates when it becomes appropriate to do so and to maintain reasonable control of the level of short-term interest rates as policy continues to firm thereafter, even though the level of reserves held by depository institutions is likely to diminish only gradually. The primary means of raising the Federal funds rate will be to increase the rate of interest paid on excess reserves. The Committee also will use an overnight reverse repurchase agreement facility and other supplementary tools as needed to help control the Federal funds rate. As economic and financial conditions evolve, the Committee will phase out these supplementary tools when they are no longer needed.

The Committee intends to reduce its securities holdings in a gradual and predictable manner primarily by ceasing to reinvest repayments of principal from securities held by the Federal Reserve. It is the Committee's intention to hold, in the longer run, no more securities than necessary for the efficient and effective implementation of monetary policy, and that these securities be primarily Treasury securities.

Summary

In sum, since the July 2014 *Monetary Policy Report*, there has been important progress toward the FOMC's objective of maximum employment. However, despite this improvement, too many Americans remain unemployed or underemployed, wage growth is still sluggish, and inflation remains well below our longer-run objective. As always, the Federal Reserve remains committed to employing its tools to best promote the attainment of its objectives of maximum employment and price stability.

Thank you. I would be pleased to take your questions.

RESPONSES TO WRITTEN QUESTIONS OF CHAIRMAN SHELBY FROM JANET L. YELLEN

Q.1. The Financial Stability Board (FSB), of which the Federal Reserve is a member, recently issued a proposal for a new long-term debt requirement for large financial institutions. The Federal Reserve is expected to base its own long-term debt rule on the FSB's proposal. However, the FSB is now conducting a quantitative impact study to assess costs and effects of its proposal. Because the comment period on the FSB proposal has already closed, the public will not be able to comment on the results of the FSB study. Do you think it is important for the public to be able to comment on the FSB study? Will the Fed do its own quantitative impact study before implementing the FSB rule? If not, why not and is it appropriate to base a rule for U.S. banks on a study conducted by an international regulatory body?

A.1. Since the financial crisis, U.S. authorities and foreign regulators have been working to identify and mitigate the obstacles to an orderly resolution or wind-down of a global systemically important bank (GSIB). To achieve this objective, a failed GSIB in resolution must have a sufficient amount of loss-absorbing resources so that shareholders and creditors—instead of taxpayers—will bear the costs of its failure. Accordingly, in November 2014, the FSB published for consultation a proposal for a common international standard on the total loss-absorbing capacity for GSIBs (TLAC proposal). The comment period for the FSB's TLAC proposal closed in February 2015; the FSB received comments from a range of commenters, including U.S. trade associations and public policy advocates. In connection with the TLAC proposal, the FSB is currently coordinating a comprehensive quantitative impact study to which the Federal Reserve and other U.S. authorities are contributing participants.

Independently, the Federal Reserve has been developing a proposal that would require the largest, most complex U.S. banking firms to keep outstanding minimum amounts of long-term, unsecured debt at the holding company level (U.S. long-term debt proposal). In proposing and adopting rules on long-term debt requirements for U.S. banking firms, the Federal Reserve will seek public comment and comply fully with the Administrative Procedures Act and other applicable Federal law. To the extent that the FSB quantitative impact study provides information that is relevant to the U.S. long-term debt proposal, the Federal Reserve will take that information into account in preparing the materials that it publishes for public comment. As part of the rulemaking process, the Federal Reserve would consider all public comments as well as the public benefits and burdens associated with the proposed regulation.

Q.2. During a hearing last June in connection with the Financial Stability Oversight Council's (FSOC) Annual Report to Congress, Treasury Secretary Jack Lew responded to a question regarding the designation process for SIFI and G-SIFI institutions and the closely correlative timing by saying that, " . . . the FSB does not make decisions for national authorities." Both the Secretary of the Treasury and the Chair of the Federal Reserve are members of both FSOC and FSB. There have been instances of FSB designating certain U.S. companies as systemically important before the FSOC did so, and other instances where the FSB proposed rules that U.S. regulators then promulgated domestically. Do you believe it is appropriate for a Federal Reserve governor to vote on an FSB proposal or determination before the FSOC votes on the same issue? What specific processes and safeguards are in place that prevent FSB rules and decisions from being implemented in the U.S. through FSOC as a matter of formality and without due regard to the regulatory process and our existing regulatory framework?

A.2. The FSOC's process for designating nonbank firms as systemically important assesses the potential harm that a firm's distress or failure would cause to the economy of the United States. The methodology underlying this assessment process, including the quantitative metrics used to rule out smaller, less complex firms, has been made public.[1] In addition, for the firms it ultimately votes to designate, the FSOC publishes a description of the basis for its finding. No part of this process is linked, mechanically or otherwise, with the deliberations or findings of agencies outside the United States, including the FSB.

The leaders of the Group of 20 Nations, including the United States, charged the FSB with, in part, identifying firms whose distress would threaten the global economy. The fact that both groups have examined the same firms, at times in close proximity, is to be expected given the limited number of firms which would reasonably be large enough to be considered systemically important. However, the specific designation frameworks and standards at the FSB and FSOC are materially different.

As an example, the FSB's process for identifying global systemically important insurers (G-SIIs) is completely independent of the FSOC's designation process. A designation by the FSB that an insurer is systemically important would not logically require a similar finding by the FSOC, even if the FSB and the FSOC agreed on the underlying facts.

The methodology for identifying global systemically important insurers (G-SIIs) was developed by the International Association of Insurance Supervisors (IAIS). The IAIS' assessment methodology uses five categories to measure relative systemic importance: (1) nontraditional insurance and non-insurance (NTNI) activities, (2) interconnectedness, (3) substitutability, (4) size, and (5) global activity. Within these five categories, there are 20 indicators, including: intra financial assets and liabilities, gross notional amount of derivatives, Level 3 assets, non-policyholder liabilities and non-insurance revenues, derivatives trading, short term funding, and variable insurance products with minimum guarantees.

The FSOC considers a threat to the financial stability of the United States to exist if a nonbank financial company's material financial distress or activities could be transmitted to, or otherwise affect, other firms or markets, thereby causing a broader impairment of financial intermediation or of financial market functioning. An impairment of financial intermediation and financial market functioning can occur through several channels, including through:

[1] *http://www.treasury.gov/initiatives/fsoc/rulemaking/Documents/Authority to Require Supervision and Regulation of Certain Nonbank Financial Companies.pdf*

(1) exposure of other financial market participants to the firm; (2) liquidation of its assets; or (3) failure of the firm to perform a critical service or function that is relied upon by other market participants. The FSOC's analysis is based on a broad range of quantitative and qualitative information available to the FSOC through existing public and regulatory sources and as submitted to FSOC by the firm under consideration. The analysis is tailored, as appropriate, to address company-specific risk factors, including but not limited to, the nature, scope, size, scale, concentration, interconnectedness, and mix of the activities of the firm.

Any standards adopted by the FSB, including designation of an entity as a global systemically important financial institution (G-SIFI), are not binding on the Federal Reserve, the FSOC, or any other agency of the U.S. government, or any U.S. companies. Thus, FSB designation of an entity as a nonbank SIFI does not automatically result in the Federal Reserve Board becoming the entity's prudential regulator. Under the Dodd-Frank Wall Street Reform and Consumer Protection Act (Dodd-Frank Act), the FSOC is responsible for deciding whether a nonbank financial company should be regulated and supervised by the Federal Reserve Board, based on its assessment of the extent to which the failure, material distress, or ongoing activities of that entity could pose a risk to the U.S. financial system.

Q.3. Governor Tarullo, the Federal Reserve's representative to the FSB, stated that the Fed will be promulgating a rule to implement domestically the FSB's proposal on minimum margin requirements for certain forms of securities financing deals. As the FSB has been criticized for lack of transparency and accountability by U.S. officials and regulators, it is troubling that the Fed's FSB representative would indicate the rule's quick adoption in the United States. Is the Federal Reserve going to undertake an analysis independent from the FSB before promulgating a similar rule domestically? Since securities financing regulation has traditionally been within the purview of the Securities and Exchange Commission (SEC), not the Federal Reserve, how does the Federal Reserve intend to proceed with this rule and is the SEC going to be involved in that process? If not, why not? What expertise and knowledge does the Federal Reserve possess in this area?

A.3. The Federal Reserve would adopt minimum margin requirements for securities financing transactions only following a notice-and-comment rulemaking process supported by an independent assessment of the merits of such an approach. During that rulemaking process, the Federal Reserve would consult with the SEC, as well as other stakeholders and experts. The Federal Reserve would also draw on its extensive knowledge of securities financing markets.

This knowledge derives from multiple sources, including the Federal Reserve's supervision of financial institutions that are the dominant intermediaries in these markets, as well as the Federal Reserve' s direct experience in securities financing markets related to the conduct of monetary policy.

The FSB framework of minimum margin requirements has been developed through a multiyear process led by a working group that includes representatives of the Federal Reserve and the SEC. There have been multiple opportunities for public input into the FSB process:

- In April 2012, the FSB published an interim report provided an overview of the securities lending and repo markets, and identified financial stability issues in these markets.
- In August 2013, the FSB published a policy framework for addressing shadow banking risks in securities lending and repos, which included for public consultation the proposed regulatory framework of minimum margin requirements.
- In October 2014, the FSB finalized minimum margin requirements for transactions involving bank lenders and nonbank borrowers, and simultaneously proposed for public consultation the extension of the framework of minimum margin requirements to transactions involving two nonbank entities.
- In addition, the FSB conducted a multistage quantitative impact study to help gauge the impact of minimum margin requirements on market conditions.

Q.4. The Federal Reserve is a participant in negotiations within the International Association of Insurance Supervisors, which is currently developing a global capital standard for international insurance companies. How will these global capital standards for insurers impact the development of insurance capital standards here in the United States?

A.4. The Federal Reserve participates as a member to the IAIS along with our fellow U.S. members from the Federal Insurance Office and National Association of Insurance Commissioners. Along with these organizations, we advocate for the development of international standards that best meet the needs of the U.S. insurance market and U.S. consumers. The standards under development by the IAIS would only apply in the United States if adopted by the appropriate U.S. regulators in accordance with applicable domestic rulemaking procedures. Additionally, none of the standards are intended to replace the existing legal entity risk-based capital requirements that are already in place.

The Federal Reserve continues to focus on constructing a domestic regulatory capital framework for our supervised insurance holding companies that is well tailored to the business of insurance. The timeline for the development of our rulemaking is distinct from the activities of the IAIS. We are exercising great care as we approach this challenging mandate. We are committed to following a transparent rulemaking processes to develop our insurance capital framework, which will allow for an open public comment period on a concrete proposal. We will continue to engage with interested parties as we move forward.

Q.5. Over the last few years, the Federal Reserve has issued a series of new rules on capital and liquidity requirements for banks. Although these rules are important to ensure that the banking system is adequately capitalized, the must also strike the right balance to promote safety and soundness without eroding economic growth and job creation. Has the Federal Reserve conducted any cost-benefit analysis of the cumulative impact of its capital and liquidity rules on future economic growth and job creation? If yes, please share with this Committee the results of that study. If no, are you willing to conduct a cost-benefit analysis before finalizing the rules?

A.5. As required by the Dodd-Frank Act, the Federal Reserve has adopted new risk-based capital and liquidity requirements through the rulemaking process to strengthen and enhance the safety and soundness of banking organizations and the U.S. banking system.

To become informed about the benefits and burdens of any capital and liquidity requirements, the Federal Reserve collected information directly from parties that we expect will be affected by the rulemaking through surveys and meetings. The Federal Reserve also participated in several international studies assessing the potential impact of changes to the regulatory capital and liquidity requirements, which found that stronger capital and liquidity requirements could help reduce the likelihood of banking crises while yielding positive net economic benefits. [2] In the rulemaking process, the Federal Reserve specifically sought comment from the public on the burdens and benefits of the proposed approaches and on a variety of alternative approaches to the proposal. The Federal Reserve carefully considered public comments received on every notice of proposed rulemaking, including information relevant to the impact of rulemakings provided by commenters. In adopting final rules on these topics, the Federal Reserve sought to adopt a regulatory alternative that faithfully reflected the statutory provisions and the intent of Congress, while minimizing regulatory burden. We also provided an analysis of the costs on small depository organizations of our rulemaking consistent with the Regulatory Flexibility Act and computed the anticipated cost of paperwork consistent with the Paperwork Reduction Act. The Federal Reserve performs an impact analysis with respect to each final rule pursuant to the Congressional Review Act. [3]

As part of the adoption of Regulation Q, the Federal banking agencies performed an analysis that showed that the vast majority of U.S. banking organizations, including community banks, would have already met the revised capital requirements plus the capital conservation buffer on a fully phased-in basis, which suggests that any negative impact stemming from the revised capital rule on credit availability should be small.

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[2] Those studies included the Macroeconomic Assessment Group (MAG), a joint group of the Basel Committee on Banking Supervision (BCBS) and Financial Stability Board, (ii) the long-term economic impact working group of the BCBS, and (iii) the BCBS Quantitative Impact Study. See MAG, "Assessing the Macroeconomic Impact of the Transition to Stronger Capital and Liquidity Requirements" (MAG Analysis), available at: *http://www.bis.org/publ/othpl2.pdf.* See also BCBS "An Assessment of the Long-Term Economic Impact of Stronger Capital and Liquidity Requirements" (LEI Analysis), also available at: *http://www.bis.org/publ/bcbs173.pdf.* See also "Results of the Comprehensive Quantitative Impact Study", also available at: *http://www.bis.org/publ/bcbs186.pdf.*

[3] Before issuing any final rule, the Federal Reserve prepares an analysis under the CRA and provides the analysis to the Office and Management and Budget for its review. As part of this analysis, the Federal Reserve assesses whether the final rule is a "major rule," meaning the rule could (i) have an annual effect on the economy of $100 million or more; (ii) increase or process for consumers, individual industries, Federal, States, or local government agencies, or geographic regions; or (iii) have significant adverse effects on competition, employment, investment, productivity, or innovation.

RESPONSES TO WRITTEN QUESTIONS OF SENATOR CRAPO FROM JANET L. YELLEN

Q.1. Will the Federal Reserve follow a formal rulemaking process for insurance capital standards and not use an expedited process like imposing the standards by order?

A.1. The Federal Reserve is committed a transparent rulemaking processes to develop our insurance capital framework. This will allow for an open public comment period on a concrete proposal.

Q.2. Recognizing that there are two standard development tracks running at the same time—development of a domestic capital standard at the Federal Reserve, and development of an international capital standard at the IAIS—could you explain how the Federal Reserve is coordinating these efforts?

A.2. The Federal Reserve participates as a member to the International Association of Insurance Supervisors (IAIS) along with our fellow U.S. members from the Federal Insurance Office and National Association of Insurance Commissioners. Along with these organizations, we advocate for the development of international standards that best meet the needs of the United States insurance market. The standards under development by the IAIS would only apply in the United States if adopted by the appropriate U.S. regulators in accordance with applicable domestic rulemaking procedures. Additionally, none of the standards are intended to replace the existing legal entity risk-based capital requirements that are already in place.

The Federal Reserve continues to focus on constructing a domestic regulatory capital framework for our supervised insurance holding companies that is well tailored to the business of insurance. We are committed to a transparent rulemaking process and are engaging stakeholders at various levels. The timeline for the development of our rulemaking is distinct from the activities of the IAIS. We are exercising great care as we approach this challenging mandate. We will continue to engage with interested parties as we move forward.

Q.3. The Basel Advanced Approaches regulation provides an avenue for companies to request a waiver from the rule. In effect, this would allow an institution to use the Basel Standardized Approach to calculate its capital ratios. How would the waiver process work? What are the types of criteria that would be considered?

A.3. Under the banking agencies' regulatory capital rules, [1] internationally active banking organizations (specifically, those with total consolidated assets of $250 billion or more or with consolidated total on-balance-sheet foreign exposure of $10 billion or more) must calculate risk-based capital using the advanced approaches risk-based capital rules (the advanced approaches rule) in addition to the standardized approach. Section 100(b)(2) of the regulatory capital rules provides that a banking organization subject to the advanced approaches rule shall remain subject to that rule until the primary Federal regulator determines that application of

[1] 12 CFR part 3 (national banks and Federal savings associations), 12 CFR part 217 (State member banks, bank holding companies, and savings and loan holding companies), and 12 CFR part 324 (State nonmember banks and State savings associations).

the advanced approaches rule is not appropriate in light of the banking organization's size, level of complexity, risk profile, or scope of operations. In making such a determination, the primary Federal regulator must apply notice and response procedures. The primary Federal regulator may also set conditions on the granting of the waiver as appropriate, and any waiver granted must be consistent with safety and soundness. The capital adequacy of a banking organization that meets the thresholds described above but has received a waiver from application of the advanced approaches rules would be addressed by standardized risk-based capital rules, leverage rules, and capital planning and supervisory stress-testing requirements.

RESPONSES TO WRITTEN QUESTIONS OF SENATOR VITTER FROM JANET L. YELLEN

Q.1. Ms. Yellen, in 2013, Bloomberg View, looking at 2009 credit-rating date prices, placed the value on "too big to fail" subsidy at $83 billion. Another study by the International Monetary Fund released in March, 2014 put the number somewhere between $16 billion and $70 billion annually in 2011 and 2012 for the eight largest U.S. Banks. The GAO in a report released last summer then confirmed the fact that Wall Street megabanks have not only received more support from Government bailout programs, but enjoy a taxpayer-funded advantage over community and regional banks that widens during times of economic crisis.

Do you believe that megabanks, because creditors assume the Government can't let them collapse, borrow for less than they otherwise would giving them an unfair advantage over regional and community banks? Do you think the supplemental leverage ratio should be strengthened further to offset this advantage?

A.1. It is well documented that large banks generally fund themselves at lower cost than smaller banks. Identifying a single, specific reason for this funding differential, however, is challenging since large banks and small banks differ along many different dimensions. At the same time, it is not unreasonable to assume that at least some of the observed funding differential owes to heightened investor expectations of public support for large banks.

Despite the fact that large banks may benefit to some degree from heightened investor expectations of Government support, it should be noted that the evidence in favor of such a "Too Big to Fail" (TBTF) subsidy has waned in recent years. In particular, the cited Government Accountability Office (GAO) study documents that the estimated size of the TBTF subsidy has declined significantly since the financial crisis. In addition, rating agencies have begun to remove their explicit rating uplift that was directly tied to expectations of Government support.

This decline in the observed TBTF subsidy is not an accident. Rather, a number of coordinated policies are working in concert to improve the capital and liquidity position as well as the resolvability of our largest and most systemic banks which will reduce both the probability of any future insolvency as well the need to provide Government support in the event that a large bank fails in the future. More specifically, the capital position of our largest banks has been improved with the finalization of Basel III and the recently proposed Systemically Important Financial Institution (SIFI) capital surcharges will further enhance the resiliency of our largest and most systemic banks. The new liquidity coverage requirement (LCR) will further help to ensure that large and systemic banks have the needed liquidity to manage through a period of financial stress. Finally, provisions of Dodd-Frank Wall Street Reform and Consumer Protection Act's (Dodd-Frank Act) Title II were designed to ensure that a large and systemically important bank could be resolved in bankruptcy without requiring any taxpayer support.

Accordingly, a number of policies that were put in place following the financial crisis have resulted in much tighter regulation of large and systemically important banks and are reducing any TBTF subsidy resulting from heightened investor expectations of Government support.

Q.2. The Dodd-Frank Act arguably allows the assets of an insurance company affiliated with a failing depository institution to be used to cover the costs of resolving the depository institution. Such action could significantly harm the policyholders of the insurance company.

Accordingly, do you support legislation clarifying that money held by insurance affiliates of failing depository institutions cannot be transferred without the consent of State insurance regulators?

A.2. The Federal Reserve has long considered the source of strength doctrine, which was codified in the Dodd-Frank Act, to be an important component of reducing the likelihood of bank failures and protecting taxpayers against losses that might arise from bank failures. Section 616 of the Dodd-Frank Act requires all depository institution holding companies to serve as a source of financial strength to their subsidiary depository institutions, including bank holding companies, savings and loan holding companies, and any other company that controls an insured depository institution. Under section 5(g) of the Bank Holding Company Act, the ability of the Federal Reserve to require a bank holding company to provide funds to a subsidiary insured depository institution may be blocked by a State insurance regulator if the funds would be provided by a bank holding company or a subsidiary of the holding company that is an insurance company.

We understand that legislation has been proposed which would extend the same treatment to insurance companies that are savings and loan holding companies or are companies that otherwise control an insured depository institution. While this legislation would provide consistency of treatment between bank holding companies and other depository institution holding companies, it would weaken the ability of these companies to be a source of strength to their insured depository institutions.

RESPONSES TO WRITTEN QUESTIONS OF SENATOR KIRK FROM JANET L. YELLEN

Q.1. Chair Yellen, what is the appropriate response time for the Fed to respond to a written question by a Senator on the Banking Committee?

Would you agree that over 6 months is unacceptable?

What is the average response time for the Fed to respond to Congress?

What is the Federal Reserve Board process for responding to official Congressional correspondence?

A.1. The Board recognizes the oversight function that the Committee exercises over the Federal Reserve and has long and consistently cooperated to provide the Committee with information that it needs to conduct its oversight role. It is the custom and practice of the Federal Reserve to respond fully to requests for information from Congress, including responses to questions for the record following hearings. As always, we endeavor to respond to requests fully and in as timely a manner as possible.

Q.2. Now that the Federal Reserve oversees approximately ⅓ of the life insurance industry by premium volume, it is essential that the Federal Reserve has the proper person[ne]l and expertise to support proper insurance regulatory oversight. In addition to the hiring of former Connecticut Insurance Commissioner Tom Sullivan, how many other individuals has the Board hired that have experience regulating insurance companies?

A.2. The Federal Reserve is investing significant time and effort into enhancing our understanding of the insurance industry and firms we supervise, and we are committed to tailoring our supervisory framework to the specific business lines, risk profiles, and systemic footprints of the insurance holding companies we oversee. As part of this, we have hired a significant number of staff who have prior experience regulating insurance companies.

Q.3. How does the Board assign examiners to insurance companies?

A.3. The Federal Reserve considers a number of factors when assigning staff to supervisory teams in order to best meet our supervisory objectives of protecting the safety and soundness of consolidated firms and mitigating any risks to financial stability. These teams are combination of Federal Reserve staff with expertise in risk management, insurance, and specific areas of supervision.

Q.4. How many examiners with insurance experience currently work for the Federal Reserve?

A.4. The Federal Reserve employs approximately 70 people to supervise insurance holding companies. We will continue to evaluate our needs and increase our hiring as needed.

Q.5. What policies and procedures has the Federal Reserve established for conducting supervision of insurance companies?

A.5. After the passage of the Dodd-Frank Wall Street Reform and Consumer Protection Act (Dodd-Frank Act), the Federal Reserve moved quickly to develop a supervisory framework that is appropriate for insurance holding companies that own depository institutions and promptly assigned supervisory teams to handle day-to-day supervision of those insurance holding companies. We also acted promptly to commence supervision of the three insurance holding companies designated by the Financial Stability Oversight Council for Federal Reserve supervision. While building our supervisory regime for these firms, we have reached out to our colleagues in the State insurance departments. Our supervisory efforts to date have focused on strengthening firms' risk identification, measurement, and management; internal controls; and corporate governance. Our principal supervisory objectives for insurance holding companies are protecting the safety and soundness of the consolidated firms and their subsidiary depository institutions while mitigating any risks to financial stability. The supervisory program continues to be tailored to consider the unique characteristics of insurance operations and to rely on the work of the primary functional regulator to the greatest extent possible.

Q.6. The International Association of Insurance Supervisors (IAIS) is currently developing global insurance capital standards. This process is occurring at the same time the Fed is implementing the Insurance Capital Standards Clarification Act and authoring domestic insurance capital standards. The international standards have received a good amount of criticism here in the U.S. There is particular concern that the Fed may agree to IAIS standards before domestic standards are finalized. Does the Federal Reserve intend to precede these international efforts?

A.6. The Federal Reserve participates as a member to the IAIS along with our fellow U.S. members from the Federal Insurance Office (FIO) and National Association of Insurance Commissioners (NAIC). Along with these organizations, we advocate for the development of international standards that best meet the needs of the U.S. insurance market and U.S. consumers. The standards under development by the IAIS would only apply in the United States if adopted by the appropriate U.S. regulators in accordance with applicable domestic rulemaking procedures. Additionally, none of the standards are intended to replace the existing legal entity risk-based capital requirements that are already in place.

The Federal Reserve continues to focus on constructing a domestic regulatory capital framework for our supervised insurance holding companies that is well tailored to the business of insurance. The timeline for the development of our rulemaking is distinct from the activities of the IAIS. We are exercising great care as we approach this challenging mandate. We are committed to following a transparent rulemaking processes to develop our insurance capital framework, which will allow for an open public comment period on a concrete proposal. We will continue to engage with interested parties as we move forward.

Q.7. Who represents the Federal Reserve Board at meetings of the IAIS?

A.7. Since joining the IAIS in late 2013, the Federal Reserve has been an active participant in several key committees, working groups, and work streams. We currently hold a seat on the Financial Stability Committee and the Technical Committee of the IAIS. Our participation in these activities is primarily overseen by Thomas Sullivan, Associate Director, Division of Banking Supervision and Regulation, with support and participation of other staff of the Federal Reserve System at the direction and under the supervision of the Board of Governors which ultimately is responsible for our policy positions.

Q.8. Can you describe the process the U.S. uses to present a position during IAIS negotiations?

A.8. The Federal Reserve has acted on the international insurance stage in an engaged partnership with our colleagues from the FIO, the State insurance commissioners, and the NAIC. We collaborate with one another both formally and informally on matters of import which are before the IAIS membership. Our multiparty dialogue, while respectful of each of our individual authorities, strives to develop a central "Team USA" position on the most critical matters of global insurance regulatory policy.

RESPONSES TO WRITTEN QUESTIONS OF SENATOR HELLER FROM JANET L. YELLEN

Q.1. Shortly after the Federal Reserve joined the International Association of Insurance Supervisors (IAIS), the IAIS voted to shut out public observers including consumer groups from most of their meetings. How did the Federal Reserve representative vote on this issue? If the Federal Reserve is committed to being transparent in its operations, will you support allowing the public to observe the IAIS meetings in the same way Congress—and this Committee—does with its hearings and mark-ups?

A.1. The Federal Reserve, along with our partners, the State insurance commissioners, the National Association of Insurance Commissioners and the Federal Insurance Office have, and will continue to actively seek out U.S. insurance stakeholders to ensure we are fully engaged and understanding of their perspectives as we negotiate global insurance standards at IAIS. For instance, the U.S. delegation has hosted several meetings in recent months, where we invited in U.S. insurance stakeholders for open dialogue and active working sessions regarding matters of policy which are currently before the IAIS. This level of engagement will continue with U.S. interested parties.

The Federal Reserve supports intervals and protocols for stakeholders to provide comment and input. We believe strongly in independence within the standard setting process and would also seek to mitigate any opportunity for regulatory capture within the proceedings. The IAIS voted to revise its approach for industry participation in standard setting. Under the new process, industry will no longer provide financial support to the IAIS or be day-to-day participants in the development of international supervisory standards for insurance. The industry and public will be able to provide input through stakeholder meetings as well as through comments on exposures of draft IAIS proposals. The Federal Reserve supports transparency in rulemaking and policy development and believes that it is critical that standard-setting bodies be fully independent of the regulated.

Q.2. The Financial Stability Oversight Council (FSOC) recently adopted guidance on how it deals with entities it is considering for SIFI designation, however the Council's actions did not address concerns about how it mitigates systemic risk. In particular, the Council did not create a process that would reduce potential threats to the financial system by allowing a company or its primary regulator to address identified risks before designation. Shouldn't FSOC's primary focus be to identify and ensure systemic risks are addressed rather than simply sending a nonbank entity to the Federal Reserve for undefined regulation? Why should the Federal Reserve regulate nonbank systemically important financial institutions as opposed to their primary regulator?

A.2. The Dodd-Frank Act gives the FSOC authority to reduce systemic risks by requiring that systemically important financial institutions be supervised by the Federal Reserve and subject to enhanced prudential standards. Such enhanced prudential standards are designed to reduce systemic risk by ensuring that these firms maintain adequate capital and liquidity, and that they appropriately plan for an orderly resolution in the event of their failure. In supervising systemically important financial institutions, the Federal Reserve's role is not to replace the functional regulator, but rather to focus on consolidated supervision and systemic risk reduction. The Federal Reserve is committed to tailoring its enhanced prudential standards for systemically important firms it supervises to the specific risks posed by each firm. The Dodd-Frank Act requires the FSOC to reevaluate each designation annually to consider whether the designation should be rescinded. This annual review process establishes a process for the FSOC to rescind a designation if the company has taken steps to reduce the risk that the firm poses a threat to the financial stability of the United States.

RESPONSES TO WRITTEN QUESTIONS OF SENATOR MENENDEZ FROM JANET L. YELLEN

Q.1. With Congress preparing to consider a budget in the near future, some members on the other side of the aisle are calling for severe, across-the-board funding cuts. In addition to being bad policy for many of the priorities that could be cut, what would be the impact on the economy of a major fiscal tightening? How is the Fed taking into account the risk of new fiscal austerity in its timeline for tightening?

If Congress were to impose severe fiscal cuts, would the Fed have to delay its timeline for tightening monetary policy to compensate for the contractionary effect? Given where monetary policy is with respect to the zero lower bound, wouldn't it be better policy to allow monetary policy to normalize first, before considering severe budget cuts?

A.1. The implications for the economy of a fiscal contraction would depend on many aspects of the situation. But in general, a fiscal contraction would generally be associated with slower GDP growth for a time, higher unemployment for a time, and somewhat lower inflation for a time, holding all other influences on the economy constant. As time passed, these effects would normally be expected to fade, as a result of the normal pursuit of monetary policy objectives, namely price stability and maximum employment. In other words, monetary would seek to restore the economy to its mandate-consistent performance, with labor fully employed and with inflation running at its mandate-consistent pace of 2 percent.

As the Federal Open Market Committee (FOMC) assesses the best path for monetary policy to follow, the Committee attempts to take into account the totality of factors affecting the pace of progress toward the Committee's congressionally mandated policy objectives. Moreover, as I have noted many times, our policy decisions will evolve in light of the latest evidence concerning the position of the economy relative to our policy objectives. Specifically, if the sum total of factors restraining the pace of activity proves to be stronger than anticipated, then a more-accommodative monetary policy will be warranted to best promote attainment of the policy objectives. Conversely, if the factors restraining the pace of activity prove to be less potent than anticipated, then a less-accommodative monetary policy will be warranted, all else equal.

Q.2. Long-term unemployment is coming down from its peak after the financial crisis, but the level is still high. As you know, Americans who have been hit with long-term unemployment face greater obstacles to returning to work, which, in addition to the human toll on these families, reduces our economy's overall productive capacity. How can monetary policy help address the challenge of long-term unemployment? Is long-term unemployment a reason to let the economy run a little bit "hotter" for a little bit longer before tightening?

A.2. The issue of long-term unemployment is very serious, as it has enormous implications in human terms for those most directly affected by it—first and foremost the workers themselves and their immediate families—but also for the overall performance of the economy. I would note that there are some reasonably encouraging signs that, as overall labor-market conditions have improved, the situation of the long-term unemployed has also improved. The best contribution that the Federal Reserve can make to the ongoing reduction in long-term unemployment is to continue to pursue our congressionally mandated objectives of price stability and maximum employment. A broad consensus agrees that by pursuing these objectives, the Federal Reserve provides the best possible backdrop for the economy to perform as well as possible.

Q.3. As you may be aware, some of my colleagues on the other side of the aisle would like to throw sand in the gears of our financial regulators by tampering with the way agencies evaluate the benefits and costs of their actions. These proposals would impose a rigged version of cost-benefit analysis that would prevent the implementation of financial reform laws, create a nearly insurmountable obstacle to action, and invite frivolous legal challenges at taxpayers' expense. Can you elaborate on some of the problems with proposals such as these?

A.3. The Federal Reserve takes quite seriously the importance of evaluating the benefits and burdens associated with our rulemaking efforts. To become informed about these benefits and burdens, before we develop a regulatory proposal, we often collect information directly from parties that we expect will be affected by the rulemaking. This helps us craft a proposal that is both effective and minimizes regulatory burden. In the rulemaking process, we also specifically seek comment from the public on the burdens and benefits of our proposed approach as well as on a variety of alternative approaches to the proposal. In adopting a final rule, we seek to adopt a regulatory alternative that faithfully reflects the statutory provisions and the intent of Congress while minimizing regulatory burden. We also provide an analysis of the costs on small depository organizations of our rulemaking consistent with the Regulatory Flexibility Act and compute the anticipated cost of paperwork consistent with the Paperwork Reduction Act.

Imposing additional procedural steps and providing new avenues for legal challenge to the Federal Reserve's rulemaking process would likely extend the amount of time it takes the Federal Reserve to promulgate new regulations and to revise existing regulations. This could slow the pace at which the Federal Reserve implements financial reform laws and could limit the Federal Reserve's ability to respond promptly to situations where amendments to Board regulations are deemed to be necessary.

Q.4. In the aftermath of the financial crisis, there was a clear consensus that the compensation practices of some financial companies created incentives for employees to chase profits by taking on large, inappropriate risks, where taxpayers could be stuck with the downside if things went wrong. We're now approaching 5 years after the passage of the 2010 Wall Street Reform law, and many of the compensation reforms have yet to be implemented.

The Federal Reserve, with our other financial regulators, has responsibility for implementing Section 956 of the Wall Street Reform law, which prohibits compensation arrangements at financial companies that could drive inappropriate risk-taking. Can you please provide an update on the status of this rulemaking?

A.4. Section 956 of the Dodd-Frank Wall Street Reform and Consumer Protection Act (Dodd-Frank Act) requires the Federal Reserve, the Office of the Comptroller of the Currency (OCC), the Federal Deposit Insurance Corporation (FDIC), the Securities and Exchange Commission, the National Credit Union Administration Board, and the Federal Housing Finance Agency (the Agencies) to jointly issue regulations or guidelines that would prohibit any types of incentive based payment arrangement, or any feature of any such arrangement, that regulators determine encourage inappropriate risks by providing excessive compensation or that could lead to material financial loss to a covered financial institution.

Section 956 helps address a critical safety and soundness issue that may have contributed to the financial crisis: poorly designed compensation structures that can misalign incentives and result in excessive risk-taking in financial organizations. The Agencies' implementation of this and other sections of the Dodd-Frank Act, as Congress directed, is designed to address many of the systemic issues that contributed to the crisis. To that end, an interagency notice of proposed rulemaking to implement the provisions of section 956, titled Incentive-Based Compensation Arrangements, was published in the *Federal Register* on April 14, 2011. The Agencies received more than 11,000 comments on the proposal, many of which raised complex issues requiring additional research and analysis.

The Agencies' staffs are meeting regularly to work through the issues raised in the comments, which the Agencies will consider carefully before proceeding. The Federal Reserve expects that the Agencies will take further action to implement section 956 soon and the Federal Reserve recognizes the importance of completing this rulemaking as expeditiously as possible. In the meantime, the Federal Reserve will continue its ongoing supervisory and regulatory work addressing compensation-related issues at financial institutions that it supervises. Currently this work is based on the Interagency Guidance on Sound Incentive Compensation Policies,[1] enacted by the Federal Reserve, OCC and FDIC after being proposed by the Federal Reserve, as well as interagency guidelines adopted by the same agencies implementing the compensation-related safety and soundness standards in section 39 of the Federal Deposit Insurance Act.[2]

Q.5. The Federal Reserve, OCC, and FDIC have on several occasions expressed concern about the risk management practices of regulated institutions with respect to leveraged lending. As regulators have required banks to reduce their risks in this area, however, there have been reports that nonbank lenders are stepping in to fill the void. Even if regulated institutions reduce their direct exposure to leveraged loans, they still face risks from lending that occurs through the "shadow banking" sector—for example, if a regulated bank is lending money to a hedge fund or other entity that invests in risky loans, if a crisis occurs with nonbank lenders that could depresses bank asset values through a fire sale or destabilize credit availability marketwide, or through a cascade of defaults that could find its way back to a bank's doorstep.

How is the Federal Reserve working with other regulators, the Financial Stability Oversight Council, and the Office of Financial Research to monitor leveraged lending by institutions other than those it regulates?

A.5. Within the Federal Reserve, staff regularly review marketwide information on underwriting trends as well as deals being made by lenders to assess the effects of supervisory actions to require banks to reduce their risks in leveraged lending. An important part of the analysis is the extent to which the origination of leveraged loans is migrating to nonbank institutions. Federal Reserve staff's financial stability analysis looks at various sources to assess this, including market data sources which provide information on the bookrunners, or main underwriters, for highly leveraged transaction deals that have closed in the last quarter as well anecdotal evidence based on regular staff meetings with market participants. Federal Reserve staff have presented on the issue of leveraged lending to the principals of the Financial Stability Oversight Council.[3]

Q.6. How is the Fed monitoring the direct and indirect exposure of its regulated institutions to nonbank entities that are engaging in leveraged lending?

A.6. The Federal Reserve studied extensively the exposures of the majority of its regulated institutions (specifically, about 80 percent of the banking sector) to a sudden reversal in conditions in leveraged lending—alongside a severe recession—in the severely ad-

[1] 75 *Federal Register* 36395 (June 25, 2010).
[2] 12 U.S.C. §1831p-1(c); 12 CFR Part 208, Appendix D-1.
[3] See the readout from the January 21, 2015 meeting at *http://www.treasury.gov/initiatives/fsoc/council-meetings/Documents/January%2021,%202015.pdf.*

verse scenario used in the recently completed stress test exercise. This exercise studied both direct exposures—including from loans held in the pipeline prior to sale to nonbank entities and holdings of securities issued by collateralized loan obligations—as well as indirect exposures—including (as described in the scenario narrative) a sharp deterioration in the secondary market for leveraged loans and related assets consistent with the distress of a number of nonbank entities engaged in leveraged lending.

Regular assessments of financial stability by Federal Reserve staff also consider other channels through which a deterioration in the leveraged lending market—and speculative debt markets more broadly—could create strains that could then indirectly feedback on the financial sector, including the institutions that the Federal Reserve regulates. One such channel, which was highlighted in the February 24, 2015 *Monetary Policy Report*, is the growth in mutual funds and exchange-traded funds. These investors, which now hold a much higher fraction of the available stock of relatively less liquid assets (including leveraged loans), give the appearance of offering greater liquidity than the markets in which they transact and, as a result, heighten the potential for forced sales in underlying markets.

Q.7. What is the Fed's assessment of the risks currently posed by leveraged lending outside of the institutions it regulates?

A.7. Currently, the Federal Reserve sees little migration in the origination of leveraged loans as a result of supervisory actions, although staff are continuing to monitor closely this issue as described in the answer to Question 5. In terms of investors in leveraged loans, however, and as described in the answer to Question 6, mutual funds' and exchange-traded funds' holdings of a higher fraction of the available stock of relatively less liquid assets (including leveraged loans) heightens the potential for forced sales in underlying markets.

Q.8. What data can you provide regarding the share and relative riskiness of leveraged lending by nonbanks vs. regulated institutions, the exposure of regulated institutions to leveraged lending by nonbanks, and any systemic risk concerns relating to leveraged lending by nonbanks?

A.8. As described earlier, the Federal Reserve relies on a variety of market data sources—which are broadly available—to assess the state of the speculative grade corporate debt market across a variety of dimensions. Importantly, the Federal Reserve has highlighted key trends in speculative-grade corporate debt markets, including issuance volume and important underwriting trends in recent *Monetary Policy Reports.*

The Federal Reserve sees little migration in the origination of leveraged loans as a result of supervisory actions. However, in the instances where nonbanks have increased their share of originations of leveraged loans, often these transactions have been higher risk.

The Federal Reserve's views on leveraged lending are informed by the findings of ongoing supervisory examinations of practices at banks. We publish the findings of an important part of this supervisory exercise, the Shared National Credits review.[4]

Q.9. In your remarks at the National Summit on Diversity in the Economics Profession on October 30, 2014, you highlighted the need for diversity in the economics profession—both at the Federal Reserve and elsewhere—and discussed how a diversity of perspectives can lead to more informed policy decisions and research that informs policy. What steps is the Federal Reserve taking to cultivate diversity among its economists and more broadly, and in particular among its senior and mid-level leadership? How would you rate the Federal Reserve's progress so far? What role does the Office of Minority and Women Inclusion play in this process?

A.9. I would reiterate the Federal Reserve's commitment to diversity, and while we continue to work towards achieving a more diverse workforce, we recognize that we need to do more. During the initial stages of appointing official staff, the Director of the Office of Minority and Women Inclusion (OMWI), who also is the Director of Office of Diversity and Inclusion (ODI), is consulted and is a member of the reviewing team that evaluates proposed official staff actions.

This allows the ODI Director to better support inclusion and diversity at the official staff level and to ensure that the Board's leadership nomination criteria and process are inclusive.

In 2014, the Federal Reserve hired 36 economists, of which 33 percent were minorities and 19 percent were women. Based on the 2010 Census civilian labor force data and subsequent updates, the availability of minority and female candidates in the economist job occupation remains low. To foster recruitment, the Federal Reserve continues to organize, oversee, and participate in the three programs under the purview of the American Economic Association's (AEA) Committee on the Status of Minority Groups in the Economics Profession (CSMGEP): (1) the Summer Economics Fellow Program, (2) the Summer Training Program, and (3) the Mentoring Program. Also, through its participation in the Science Technology Engineering and Mathematics (STEM) Education Coalition and financial literacy programs, the Federal Reserve aims to stimulate an interest in economics and math among minorities and women.

However, the Federal Reserve faces real challenges in hiring minorities in the economist job family as does the rest of the economics profession. The Federal Reserve has addressed these challenges as an active member of the AEA's CSMGEP, which was established by the AEA to increase the representation of minorities in the economics profession, primarily by broadening opportunities for a training of underrepresented minorities. The Board continues to be involved in the range of program (from undergraduate to post-Ph.D.) sponsored by CSMGEP including the following:

- The Federal Reserve partnered with the AEA to host the National Summit on Diversity in the Economics Profession at the Federal Reserve on October 30, 2014, in Washington, DC. This conference brought together presidents and research directors

[4] See the results of the review at: *http://www.federalreserve.gov/newsevents/press/bcreg/20141107a.htm.*

of the Federal Reserve Banks and chairs of economics departments from around the country to open a profession-wide dialogue about diversity. Speakers and panelists discussed the state of diversity in the economics profession and examples of successful diversity initiatives in academia. A hallmark of the conference was the opportunity for collegial learning, discussion, and sharing among faculty peers to develop practical ideas about what can be accomplished to attract and retain diversity in the economics profession. The proceedings of the conference are available on the Federal Reserve's public Web site;[5]

- Board staff have been involved with the CSMGEP Summer Training Program since its inception in 1974. That program is designed to provide undergraduate students with a program of study and research opportunities that prepare then to enter doctoral level Ph.D. programs in economics. Board staff regularly participate as adjunct faculty in the Summer Training Program;
- The Federal Reserve strives to encourage summer intern applicants from the CSMGEP Summer Fellows Program for the Board's summer internship program and also focuses on matching minority advanced graduate students with research-oriented sponsoring institutions to work on their own research projects while participating in the research community at the Federal Reserve; and
- Board staff have served as mentors through the CSMGEP Mentoring Program in which students are matched with a mentor who sees them through the critical junctures of their graduate program.

In addition, the Federal Reserve has participated in or initiated other outreach efforts including the following:

- The Federal Reserve has hosted the "Math x Econ" (math times econ) program for the past 3 years which is aimed at high-performing math students in minority-serving high schools in the Washington, DC, metropolitan area. Math x Econ brings math students to the Board for a one-day program that introduces them to the field of economics with the goal of encouraging them to explore economics when they begin their college educations.
- A group of research assistants in our economics divisions as well as our supervision division continued with the fourth year of the Fed Ed Outreach program to present information on monetary policy, financial literacy, and the role of the Federal Reserve in the economy to local high school students. The program consists of hour-long presentations presented in high school classrooms or at the Board. This past school year, the program delivered 18 presentations to 11 schools and more than 500 students.

[5] *http://www.federalreserve.gov/newsevents/conferences/national-summit-diversity-economics-profession-program.htm*

Q.10. As you know, I worked during Wall Street Reform to include provisions in the law to create Offices of Minority and Women Inclusion, or OMWIs, at the Federal financial regulators, including the Federal Reserve. In 2013, the financial regulators jointly issued proposed interagency OMWI standards for assessing the diversity policies and practices of regulated entities, and it is my understanding that the regulators intend to issue final joint standards later this year. Some community groups have expressed concerns that the proposal needs stronger standards and accountability measures in order to meet its objectives and improve workforce and supplier diversity for regulated institutions, such as mandating reporting on employee and supplier diversity rather than proposing that regulated entities voluntarily submit self-assessments to the agencies.

How is the Fed responding to these concerns, and what plans do the financial regulators have to ensure the final interagency standards will be best designed to improve diversity and promote inclusion in recruiting, advancement, leadership, and contracting? What steps is the Fed taking to strengthen the final interagency standards to ensure real progress in expanding the role of women, people of color, and other underrepresented groups in the financial sector? What is the expected timeline for adopting final standards?

A.10. In 2013, an interagency working group comprising the OMWI directors from each of the financial agencies (the Federal Reserve, the Federal Deposit Insurance Corporation, the Office of the Comptroller of the Currency, the National Credit Union Administration, the Consumer Financial Protection Bureau, and the Securities and Exchange Commission) published proposed standards for assessing the diversity policies and practices of entities regulated by each agency. The proposed standards were published in the *Federal Register* on October 25, 2013, for public comment; the comment period was later extended to February 7, 2014, to allow interested parties adequate time to respond.

The standards seek to promote transparency and awareness of diversity policies and practices within regulated entities, and provide a framework for assessing diversity in four major areas:

- Organizational commitment to diversity and inclusion
- Workforce profile and employment practices
- Procurement and business practices and supplier diversity
- Practices to promote transparency of organizational diversity and inclusion

The agencies carefully considered over 200 comments received and on June 9, 2015, issued a joint press release announcing publication in the *Federal Register* of the final policy statement that establishes joint standards for assessing the diversity policies and practices of the entities they regulate. The final policy statement establishing joint standards is effective as of the date it is published in the *Federal Register*, June 10, 2015. The press release and policy statement are posted on our public Web site.[6]

The joint standards, which are generally similar to the proposed standards, provide a framework for regulated entities to create and

[6] *http://www.federalreserve.gov/newsevents/press/bcreg/20150609a.htm*

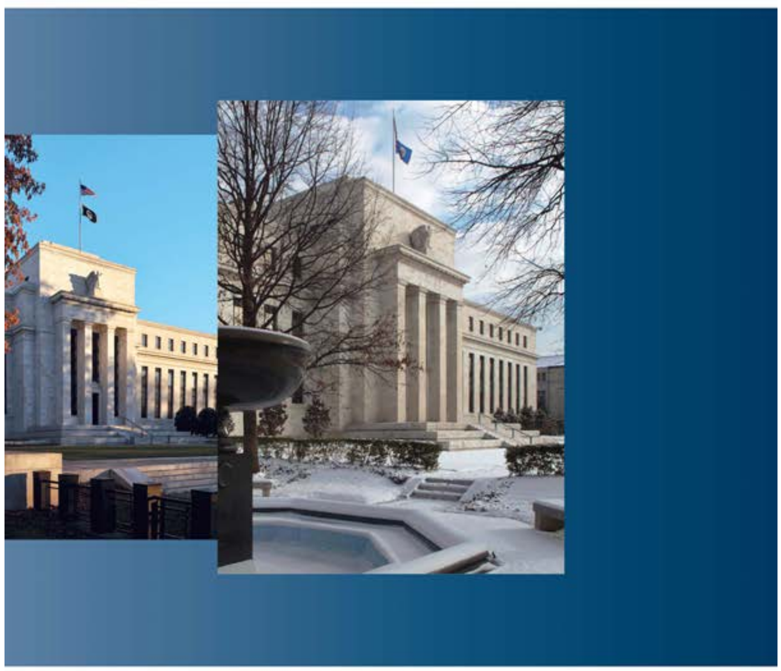
strengthen their diversity policies and practices—including their organizational commitment to diversity, workforce and employment practices, procurement and business practices, and practices to promote transparency of organizational diversity and inclusion within the entities' U.S. operations.

ADDITIONAL MATERIAL SUPPLIED FOR THE RECORD

For use at 10:00 a.m., EST
February 24, 2015

MONETARY POLICY REPORT

February 24, 2015



Board of Governors of the Federal Reserve System

Letter of Transmittal

Board of Governors of the
Federal Reserve System

Washington, D.C., February 24, 2015

The President of the Senate
The Speaker of the House of Representatives

The Board of Governors is pleased to submit its *Monetary Policy Report* pursuant to section 2B of the Federal Reserve Act.

Sincerely,

Janet L. Yellen

Janet L. Yellen, Chair

Statement on Longer-Run Goals and Monetary Policy Strategy

Adopted effective January 24, 2012; as amended effective January 27, 2015

The Federal Open Market Committee (FOMC) is firmly committed to fulfilling its statutory mandate from the Congress of promoting maximum employment, stable prices, and moderate long-term interest rates. The Committee seeks to explain its monetary policy decisions to the public as clearly as possible. Such clarity facilitates well-informed decisionmaking by households and businesses, reduces economic and financial uncertainty, increases the effectiveness of monetary policy, and enhances transparency and accountability, which are essential in a democratic society.

Inflation, employment, and long-term interest rates fluctuate over time in response to economic and financial disturbances. Moreover, monetary policy actions tend to influence economic activity and prices with a lag. Therefore, the Committee's policy decisions reflect its longer-run goals, its medium-term outlook, and its assessments of the balance of risks, including risks to the financial system that could impede the attainment of the Committee's goals.

The inflation rate over the longer run is primarily determined by monetary policy, and hence the Committee has the ability to specify a longer-run goal for inflation. The Committee reaffirms its judgment that inflation at the rate of 2 percent, as measured by the annual change in the price index for personal consumption expenditures, is most consistent over the longer run with the Federal Reserve's statutory mandate. Communicating this inflation goal clearly to the public helps keep longer-term inflation expectations firmly anchored, thereby fostering price stability and moderate long-term interest rates and enhancing the Committee's ability to promote maximum employment in the face of significant economic disturbances. The maximum level of employment is largely determined by nonmonetary factors that affect the structure and dynamics of the labor market. These factors may change over time and may not be directly measurable. Consequently, it would not be appropriate to specify a fixed goal for employment; rather, the Committee's policy decisions must be informed by assessments of the maximum level of employment, recognizing that such assessments are necessarily uncertain and subject to revision. The Committee considers a wide range of indicators in making these assessments. Information about Committee participants' estimates of the longer-run normal rates of output growth and unemployment is published four times per year in the FOMC's Summary of Economic Projections. For example, in the most recent projections, FOMC participants' estimates of the longer-run normal rate of unemployment had a central tendency of 5.2 percent to 5.5 percent.

In setting monetary policy, the Committee seeks to mitigate deviations of inflation from its longer-run goal and deviations of employment from the Committee's assessments of its maximum level. These objectives are generally complementary. However, under circumstances in which the Committee judges that the objectives are not complementary, it follows a balanced approach in promoting them, taking into account the magnitude of the deviations and the potentially different time horizons over which employment and inflation are projected to return to levels judged consistent with its mandate.

The Committee intends to reaffirm these principles and to make adjustments as appropriate at its annual organizational meeting each January.

Contents

Note: Unless otherwise noted, the time series in the figures extend through, for daily data, February 19, 2015; for monthly data, January 2015; and, for quarterly data, 2014:Q4. In bar charts, except as noted, the change for a given period is measured to its final quarter from the final quarter of the preceding period.

Summary

The labor market improved further during the second half of last year and into early 2015, and labor market conditions moved closer to those the Federal Open Market Committee (FOMC) judges consistent with its maximum employment mandate. Since the middle of last year, monthly payrolls have expanded by about 280,000, on average, and the unemployment rate has declined nearly ½ percentage point on net. Nevertheless, a range of labor market indicators suggest that there is still room for improvement. In particular, at 5.7 percent, the unemployment rate is still above most FOMC participants' estimates of its longer-run normal level, the labor force participation rate remains below most assessments of its trend, an unusually large number of people continue to work part time when they would prefer full-time employment, and wage growth has continued to be slow.

A steep drop in crude oil prices since the middle of last year has put downward pressure on overall inflation. As of December 2014, the price index for personal consumption expenditures was only ¾ percent higher than a year earlier, a rate of increase that is well below the FOMC's longer-run goal of 2 percent. Even apart from the energy sector, price increases have been subdued. Indeed, the prices of items other than food and energy products rose at an annual rate of only about 1 percent over the last six months of 2014, noticeably less than in the first half of the year. The slow pace of price increases during the second half was likely associated, in part, with falling import prices and perhaps also with some pass-through of lower oil prices. Survey-based measures of longer-term inflation expectations have remained stable; however market-based measures of inflation compensation have declined since last summer.

Economic activity expanded at a strong pace in the second half of last year. Notably reflecting solid gains in consumer spending, real gross domestic product (GDP) is estimated to have increased at an annual rate of 3¾ percent after a reported increase of just 1¼ percent in the first half of the year. The growth in GDP was supported by accommodative monetary policy, a reduction in the degree of restraint imparted by fiscal policy, and the increase in households' purchasing power arising from the drop in oil prices. The gains in GDP have occurred despite continued sluggish growth abroad and a sizable appreciation of the U.S. dollar, both of which have weighed on net exports.

Financial conditions in the United States have generally remained supportive of economic growth. Longer-term interest rates in the United States and other advanced economies have continued to move down, on net, since the middle of 2014 amid disappointing economic growth and low inflation abroad as well as the associated anticipated and actual monetary policy actions by foreign central banks. Broad indexes of U.S. equity prices have risen moderately, on net, since the end of June. Credit flows to nonfinancial businesses largely remained solid in the second half of last year. Overall borrowing conditions for households eased further, but mortgage lending standards are still tight for many potential borrowers.

The vulnerability of the U.S. financial system to financial instability has remained moderate, primarily reflecting low-to-moderate levels of leverage and maturity transformation. Asset valuation pressures have eased a little, on balance, but continue to be notable in some sectors. The capital and liquidity positions of the banking sector have improved further. Over the second half of 2014, the Federal Reserve and other agencies finalized or proposed several more rules related to the Dodd-Frank Wall Street Reform and Consumer Protection Act of 2010, which were designed to further strengthen the resilience of the financial system.

At the time of the FOMC meeting in late January of this year, the Committee saw the outlook as broadly similar to that at the time of its December meeting, when the most recent Summary of Economic Projections (SEP) was compiled. (The December SEP is included as Part 3 of this report.) The FOMC expects that, with appropriate monetary policy accommodation, economic activity will expand at a moderate pace, and that labor market indicators will continue to move toward levels the Committee judges consistent with its dual mandate of maximum employment and price stability. In addition, the Committee continues to see the risks to the outlook for economic activity and the labor market as nearly balanced. Inflation is anticipated to decline further in the near term, mainly reflecting the pass-through of lower oil prices to consumer energy prices. However, the Committee expects inflation to rise gradually toward its 2 percent longer-run objective over the medium term as the labor market improves further and the transitory effects of lower energy prices and other factors dissipate.

At the end of October, and after having made further measured reductions in the pace of its asset purchases at its July and September meetings, the FOMC concluded the asset purchase program that began in September 2012. The decision to end the purchase program reflected the substantial improvement in the outlook for the labor market since the program's inception—the stated aim of the asset purchases—and a judgment that the underlying strength of the broader economy was sufficient to support ongoing progress toward the Committee's policy objectives.

Nonetheless, the Committee continued to judge that a high degree of policy accommodation remained appropriate. As a result, the FOMC has maintained the exceptionally low target range of 0 to ¼ percent for the federal funds rate and kept the Federal Reserve's holdings of longer-term securities at sizable levels. The Committee has also continued to provide forward guidance bearing on the anticipated path of the federal funds rate. In particular, the FOMC has stressed that in deciding how long to maintain the current target range, it will consider a broad set of indicators to assess realized and expected progress toward its objectives. On the basis of its assessment, the Committee indicated in its two most recent postmeeting statements that it can be patient in beginning to normalize the stance of monetary policy.

To further emphasize the data-dependent nature of its policy stance, the FOMC has stated that if incoming information indicates faster progress toward its policy objectives than the Committee currently expects, increases in the target range for the federal funds rate will likely occur sooner than the Committee anticipates. The FOMC has also indicated that in the case of slower-than-expected progress, increases in the target range will likely occur later than currently anticipated. Moreover, the Committee continues to expect that, even after employment and inflation are near mandate-consistent levels, economic conditions may, for some time, warrant keeping the target federal funds rate below levels the Committee views as normal in the longer run.

As part of prudent planning, the Federal Reserve has continued to prepare for the eventual normalization of the stance and conduct of monetary policy. The FOMC announced updated principles and plans for the normalization process following its September meeting and has continued to test the operational readiness of its monetary policy tools. The Committee remains confident that it has the tools it needs to raise short-term interest rates when doing so becomes appropriate, despite the very large size of the Federal Reserve's balance sheet.

Part 1
Recent Economic and Financial Developments

The labor market continued to improve in the second half of last year and early this year. Job gains have averaged close to 280,000 per month since June, and the unemployment rate fell from 6.1 percent in June to 5.7 percent in January. Even so, the labor market likely has not yet fully recovered, and wage growth has remained slow. Since June, a steep drop in crude oil prices has exerted downward pressure on overall inflation, and non-energy price increases have been subdued as well. The price index for personal consumption expenditures (PCE) increased only ¾ percent during the 12 months ending in December, a rate that is well below the Federal Open Market Committee's (FOMC) longer-run objective of 2 percent; the index excluding food and energy prices was up 1¼ percent over this period. Survey measures of longer-run inflation expectations have been stable, but measures of inflation compensation derived from financial market quotes have moved down. Meanwhile, real gross domestic product (GDP) increased at an estimated annual rate of 3¾ percent in the second half of the year, up from a reported rate of just 1¼ percent in the first half. The growth in GDP has been supported by accommodative monetary policy and generally favorable financial conditions, the boost to households' purchasing power from lower oil prices, and improving consumer and business confidence. However, housing market activity has been advancing only slowly, and sluggish growth abroad and the higher foreign exchange value of the dollar have weighed on net exports. Longer-term interest rates in the United States and other advanced economies declined, on net, amid disappointing growth and low inflation abroad and the associated actual and anticipated accommodative monetary policy actions by foreign central banks.

Domestic Developments

The labor market has strengthened further . . .

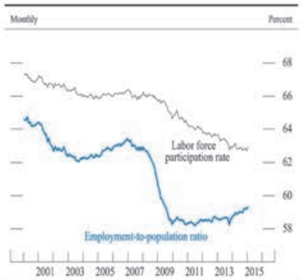
Employment rose appreciably and the unemployment rate fell in the second half of 2014 and early this year. Payroll employment has increased by an average of about 280,000 per month since June, almost 40,000 faster than in the first half of last year (figure 1). The gain in payroll employment for 2014 as a whole was the largest for any year since 1999. In addition, the unemployment rate continued to move down, declining from 6.1 percent in June to 5.7 percent in January of this year, a rate more than 4 percentage points below its peak in 2009. Furthermore, a substantial portion of the decline in unemployment over the past year came from a decrease in the number of individuals reporting unemployment spells longer than six months.

The labor force participation rate has been roughly flat since late 2013 after having declined not only during the recession, but also during much of the recovery period when most other indicators of labor market health were improving (figure 2). While much of that decline likely reflected ongoing demographic trends—such as the aging of members of the baby-boom generation into their retirement years—some of the decline likely

1. Net change in payroll employment

Source: Department of Labor, Bureau of Labor Statistics.

2. Labor force participation rate and employment-to-population ratio



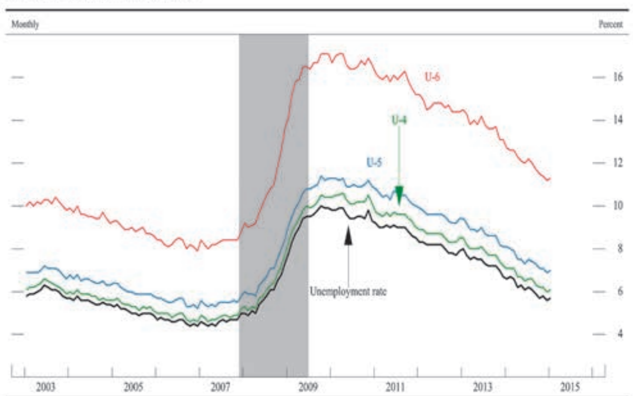
NOTE: Both series are a percent of the population aged 16 and over.
SOURCE: Department of Labor, Bureau of Labor Statistics.

reflected workers' perceptions of poor job opportunities. Judged against the backdrop of a declining trend, the recent stability of the participation rate likely represents some cyclical improvement. Nevertheless, the participation rate remains lower than would be expected given the unemployment rate, and thus it continues to suggest more cyclical weakness than is indicated by the unemployment rate.

Another sign that the labor market remains weaker than indicated by the unemployment rate alone is the still-elevated share of workers who are employed part time but would like to work full time. This share of involuntary part-time employees has generally shown less improvement than the unemployment rate over the past few years; in part for this reason, the more comprehensive U-6 measure of labor underutilization remains quite elevated (figure 3).

Nevertheless, most broad measures of labor market health have improved. With employment rising and the participation

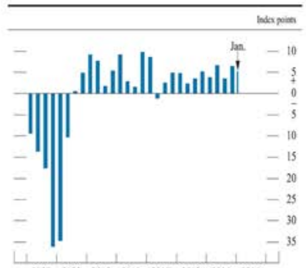
3. Measures of labor underutilization



NOTE: U-4 measures total unemployed plus discouraged workers, as a percent of the labor force plus discouraged workers. Discouraged workers are a subset of marginally attached workers who are not currently looking for work because they believe no jobs are available for them. U-5 measures total unemployed plus all marginally attached to the labor force, as a percent of the labor force plus persons marginally attached to the labor force. Marginally attached workers are not in the labor force, want and are available for work, and have looked for a job in the past 12 months. U-6 measures total unemployed plus all marginally attached workers plus total employed part time for economic reasons, as a percent of the labor force plus all marginally attached workers. The shaded bar indicates a period of business recession as defined by the National Bureau of Economic Research.
SOURCE: Department of Labor, Bureau of Labor Statistics.

rate holding steady, the employment-to-population ratio climbed noticeably higher in 2014 and early 2015 after having moved more or less sideways for much of the recovery. The quit rate, which is often perceived as a measure of worker confidence in labor market opportunities, has largely recovered to its pre-recession level. Moreover, an index constructed by Federal Reserve Board staff that aims to summarize movements in a wide array of labor market indicators also suggests that labor market conditions strengthened further in 2014, and that the gains have been quite strong in recent months (figure 4).[1]

4. Change in labor market conditions index

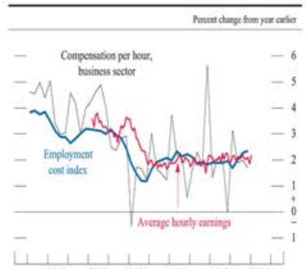


NOTE: The index has a mean of zero and a standard deviation of 100; an increase indicates an improvement in labor market conditions. Quarterly figures are averages of monthly changes.
SOURCE: Federal Reserve Board staff estimates based on data from the Conference Board; Department of Labor, Bureau of Labor Statistics and Employment and Training Administration; National Federation of Independent Business.

. . . while gains in compensation have been modest . . .

Even as the labor market has been improving, most measures of labor compensation have continued to show only modest gains. The employment cost index (ECI) for private industry workers, which measures both wages and the cost of employer-provided benefits, rose 2¼ percent over the 12 months ending in December, only slightly faster than the gains of about 2 percent that had prevailed for several years. Two other prominent measures of compensation—average hourly earnings and business-sector compensation per hour—increased slightly less than the ECI over the past year and have shown fewer signs of acceleration (figure 5). Over the past five years, the gains in all three of these measures of nominal compensation have fallen well short of their pre-recession averages and have only slightly outpaced inflation. That said, the drop in energy prices has pushed up real wages in recent months.

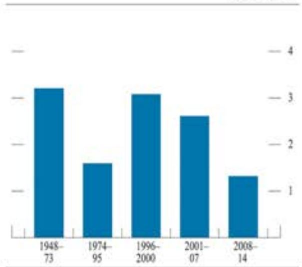
5. Measures of change in hourly compensation



NOTE: The average hourly earnings data series begins in March 2007 and extends through January 2015. The compensation per hour and employment cost index data extend through 2014:Q4. For business-sector compensation, change is over four quarters; for the employment cost index, change is over the 12 months ending in the last month of each quarter; for average hourly earnings, change is from 12 months earlier.
SOURCE: Department of Labor, Bureau of Labor Statistics.

1. For details on the construction of the labor market conditions index, see Hess Chung, Bruce Fallick, Christopher Nekarda, and David Ratner (2014), "Assessing the Change in Labor Market Conditions," Finance and Economics Discussion Series 2014-109 (Washington: Board of Governors of the Federal Reserve System, December), www.federalreserve.gov/econresdata/feds/2014/files/2014109pap.pdf.

6. Change in total business sector output per hour



Note: Changes are measured from Q4 of the year immediately preceding the period through Q4 of the final year of the period.
Source: Department of Labor, Bureau of Labor Statistics.

. . . and productivity growth has been lackluster

Over time, increases in productivity are the central determinant of improvements in living standards. Labor productivity in the private business sector has increased at an average annual pace of 1¼ percent since the recession began in late 2007. This pace is close to the average that prevailed between the mid-1970s and the mid-1990s, but it is well below the pace of the earlier post–World War II period and the period from the mid-1990s to the eve of the financial crisis (figure 6). In recent years, productivity growth has been held down by, among other factors, the sharp drop in businesses' capital expenditures over the recession and the moderate recovery in expenditures since then. Productivity gains may be better supported in the future as investment continues to strengthen.

A plunge in crude oil prices has held down consumer prices . . .

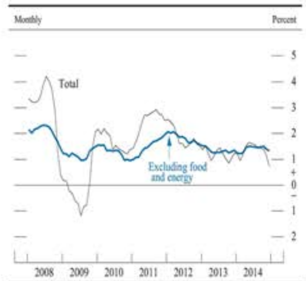
As discussed in the box "The Effect of the Recent Decline in Oil Prices on Economic Activity," crude oil prices have plummeted since June 2014. This sharp drop has caused overall consumer price inflation to slow, mainly due to falling gasoline prices: The national average of retail gasoline prices moved down from about $3.75 per gallon in June to about $2.20 per gallon in January. Crude oil prices have turned slightly higher in recent weeks, and futures markets suggest that prices are expected to edge up further in coming years; nevertheless, oil prices are still expected to remain well below the levels that had prevailed through last June.

Over the past six months, increases in food prices have moderated. Consumer food price increases had been somewhat elevated in early 2014 as a result of rising food commodity prices, but those commodity prices have since eased, and increases at the retail level have slowed accordingly.

. . . but even outside of the energy and food categories, inflation has remained subdued

Inflation for items other than food and energy (so-called core inflation) remains modest. Core PCE prices rose at an annual rate of only about 1 percent over the last six months of 2014 after having risen at a 1¾ percent rate in the first half of the year; for 2014 as a whole, core PCE prices were up a little more than 1¼ percent (figure 7). The trimmed mean PCE price index, an alternative indicator of underlying inflation constructed by the Federal Reserve Bank of Dallas, also increased more slowly in the second half of last year. Falling import prices likely held down core inflation in the second half of the year; lower oil prices, and easing prices for commodities more generally, may have played a role as well. In addition, ongoing resource slack has reinforced the low-inflation environment, though with the improving economy, downward pressure from this factor is likely waning.

7. Change in the chain-type price index for personal consumption expenditures



NOTE: The data extend through December 2014; changes are from one year earlier.
SOURCE: Department of Commerce, Bureau of Economic Analysis.

Looking at the overall basket of items that people consume, price increases remain muted and below the FOMC's longer-run objective of 2 percent. In December, the PCE price index was only ¾ percent above its level from a year earlier. With retail surveys showing a further sharp decline in gasoline prices in January, overall consumer prices likely moved lower early this year.

Survey-based measures of longer-term inflation expectations have remained stable, while market-based measures of inflation compensation have declined

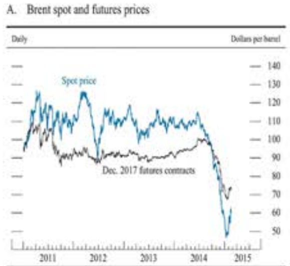
The Federal Reserve tracks indicators of inflation expectations because such expectations likely factor into wage- and price-setting decisions and so influence actual inflation. Survey-based measures of longer-term inflation expectations, including surveys of both households and professional

The Effect of the Recent Decline in Oil Prices on Economic Activity

Since June, the price of crude oil has fallen sharply, on net, with the spot price of Brent (the blue line in figure A) dropping about 50 percent and the price of the December 2017 futures contract (the black line in figure A) declining about 25 percent. Although weaker-than-expected global oil demand has contributed to the fall in prices, much of the decline is likely due to favorable supply factors, including the rapid growth of U.S. oil production, the surprising strength of oil exports from Libya and Iraq, and OPEC's decision to maintain production levels despite declining prices. The drop in oil prices has a number of economic implications, including a sizable but temporary reduction in consumer price inflation. This discussion reviews some of the channels through which the recent fall in oil prices is anticipated to affect economic activity in the United States and globally.

One important channel through which a decline in oil prices affects the global economy is the transfer of wealth from oil producers to oil consumers. As shown in the table, the largest net oil-importing countries—and thus the prime beneficiaries of lower oil prices—are the emerging Asian economies, Japan, the euro area, and, despite recent sharp increases in oil production, the United States.[1] Losses are concentrated in the oil-producing countries, including those of the Middle East, Russia, Venezuela, and, to a lesser extent, Canada and Mexico. (Lower oil prices have also destabilized financial markets in Russia and Venezuela.) Globally, the wealth transfer nets to zero, but the overall

A. Brent spot and futures prices



Source: NYMEX.

1. Although many of the largest oil importers also are oil producers, and thus have some domestic losses as well as gains, net exports of oil by country provides a useful proxy for the global distribution of gains and losses following a price change.

Net oil and petroleum product exports

	Millions of barrels per day	Percent of GDP
Emerging Asia ex. China	-9.9	-5.9
Japan	-4.4	-3.7
Euro area	-9.2	-3.0
China	-5.8	-2.6
United States	-6.6	-1.6
Central and South America ex. Venezuela	-0.8	-0.8
Mexico	0.9	2.8
Canada	1.6	3.7
Russia	7.0	13.8
Middle East	19.1	29.8
Venezuela	1.7	31.0

Note: The data are for 2013. Share of GDP is an approximation based on net export volumes valued at the Brent price on June 17, 2014 ($113.30). GDP is gross domestic product.
Source: Department of Energy; International Monetary Fund.

effect on global economic activity is likely to be stimulative in the near term; oil consumers tend to spend a substantial portion of the windfall, while oil producers generally absorb at least some of the initial effect through reduced saving or higher borrowing.

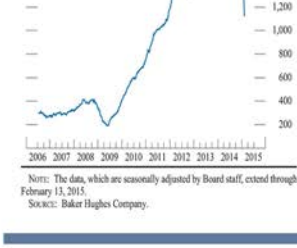
In the United States, the wealth transfer just discussed is likely to be most apparent in supporting consumer spending, as lower gasoline prices boost the real disposable income of consumers. Indeed, the recent rise in consumer sentiment and improvements in survey measures of expected income growth suggest that households are reacting quite positively to lower gasoline prices.

The stimulus from higher U.S. consumption is likely to be somewhat offset by reduced investment in the oil sector. Already there has been a sharp decline in the number of oil drilling rigs in operation (figure B), and a number of oil companies have cut their capital expenditure plans. Nonetheless, the direct effect on U.S. gross domestic product (GDP) of such a decline will be small because investment in the oil sector—though rising in recent years—accounts for only about 1 percent of GDP.

Lower oil-sector investment is likely to weigh on U.S. oil production, which has grown at a torrid pace in recent years (figure C). So far, however, U.S. oil production has yet to decline. The continued strength of production despite falling investment reflects both a propensity to cut investment in the least productive projects first and a large stock of partially completed wells that are likely to still come on line.

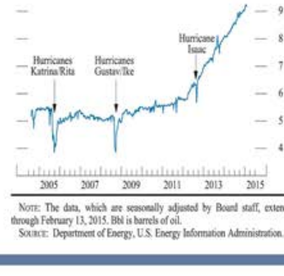
While there is a general consensus that lower oil prices should boost U.S. and global economic activity, considerable uncertainty exists regarding the ultimate size of the effect. All in all, however, for the United States as a whole, it is likely that the additional disposable income resulting from lower gasoline prices will provide a significant boost to consumer spending that will far exceed the drag from lower investment in the oil sector.

B. Domestic oil drilling rigs in operation



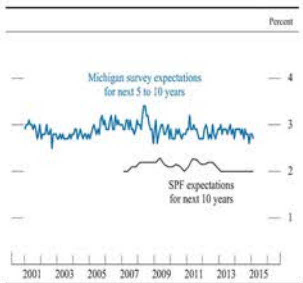
NOTE: The data, which are seasonally adjusted by Board staff, extend through February 13, 2015.
SOURCE: Baker Hughes Company.

C. Domestic crude oil extraction



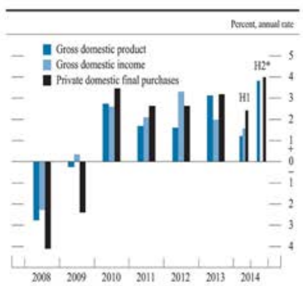
NOTE: The data, which are seasonally adjusted by Board staff, extend through February 13, 2015. Bbl is barrels of oil.
SOURCE: Department of Energy, U.S. Energy Information Administration.

8. Median inflation expectations



NOTE: The Michigan survey data are monthly and extend through February 2015. The SPF data for inflation expectations for personal consumption expenditures are quarterly and extend from 2007:Q1 through 2015:Q1.
SOURCE: University of Michigan Surveys of Consumers; Survey of Professional Forecasters (SPF).

9. Change in real gross domestic product, gross domestic income, and private domestic final purchases



* Gross domestic income is not yet available for 2014:H2.
SOURCE: Department of Commerce, Bureau of Economic Analysis.

forecasters, have been quite stable over the past 15 years; in particular, they have changed little, on net, over the past few years (figure 8). In contrast, measures of longer-term inflation compensation derived from financial market instruments have fallen noticeably during the past several months. As is discussed in more detail in the box "Challenges in Interpreting Measures of Longer-Term Inflation Expectations," deducing the sources of changes in inflation compensation is difficult because such movements may be caused by factors other than shifts in market participants' inflation expectations.

Economic activity expanded at a strong pace in the second half of 2014

Real GDP is estimated to have increased at an annual rate of 3¾ percent in the second half of last year after a reported increase of just 1¼ percent in the first half, when output was likely restrained by severe weather and other transitory factors (figure 9). Private domestic final purchases—a measure of household and business spending that tends to exhibit less quarterly variation than GDP—also advanced at a substantial pace in the second half of last year.

The second-half gains in GDP reflected solid advances in consumer spending and in business investment spending on equipment and intangibles (E&I) as well as subdued gains for both residential investment and nonresidential structures. More generally, the growth in GDP has been supported by accommodative financial conditions, including declines in the cost of borrowing for many households and businesses; by a reduction in the restraint from fiscal policy relative to 2013; and by increases in spending spurred by continuing job gains and, more recently, by falling oil prices. The gains in GDP have occurred despite an appreciating U.S. dollar and concerns about global economic growth, which remain an important source of uncertainty for the economic outlook.

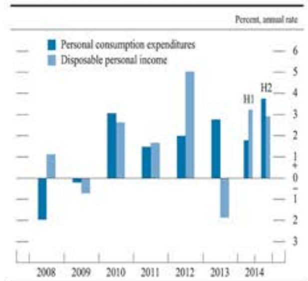
Consumer spending was supported by continuing improvement in the labor market and falling oil prices, . . .

Real PCE rose at an annual rate of 3¾ percent in the second half of 2014—a noticeable step-up from the sluggish rate of only about 2 percent in the first half (figure 10). The increases in spending have been supported by the improving labor market. In addition, the fall in gasoline and other energy prices has boosted purchasing power for consumers, especially those in lower- and middle-income brackets who spend a sizable share of their income on gasoline. Real disposable personal income—that is, income after taxes and adjusted for price changes—rose 3 percent at an annual rate in the second half of last year, roughly double the average rate recorded over the preceding five years.

. . . further increases in household wealth and low interest rates, . . .

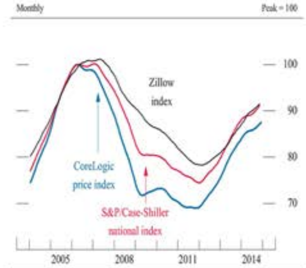
Consumer spending growth was also likely supported by further increases in household net worth, as the stock market continued to rise and house prices moved up in the second half of last year. The value of corporate equities rose about 10 percent in 2014, on top of the 30 percent gain seen in 2013. Although the gains in house prices slowed last year—for example, the CoreLogic national index increased only 5 percent after having risen more substantially in 2012 and 2013—these gains affected a larger share of the population than did the gains in equities, as more individuals own homes than own stocks (figure 11). Reflecting increases in home and equity prices, aggregate household net wealth has risen appreciably from its levels during the recession and its aftermath to more than

10. Change in real personal consumption expenditures and disposable personal income



Source: Department of Commerce, Bureau of Economic Analysis.

11. Prices of existing single-family houses



Note: The data for the Zillow and S&P/Case-Shiller indexes extend through November 2014. The data for the CoreLogic index extend through December 2014. Each index has been normalized so that its peak is 100. The CoreLogic price index includes purchase transactions only and is adjusted by Federal Reserve Board staff. The S&P/Case-Shiller index reflects all arm's-length sales transactions nationwide.

Source: The S&P/Case-Shiller U.S. National Home Price Index ("Index") is a product of S&P Dow Jones Indices LLC and/or its affiliates and has been licensed for use by the Board. Copyright © 2015 S&P Dow Jones Indices LLC, a subsidiary of the McGraw Hill Financial Inc., and/or its affiliates. All rights reserved. Redistribution, reproduction and/or photocopying in whole or in part are prohibited without written permission of S&P Dow Jones Indices LLC. For more information on any of S&P Dow Jones Indices LLC's indices please visit www.spdji.com. S&P® is a registered trademark of Standard & Poor's Financial Services LLC and Dow Jones® is a registered trademark of Dow Jones Trademark Holdings LLC. Neither S&P Dow Jones Indices LLC, Dow Jones Trademark Holdings LLC, their affiliates nor their third party licensors make any representation or warranty, express or implied, as to the ability of any index to accurately represent the asset class or market sector that it purports to represent and neither S&P Dow Jones Indices LLC, Dow Jones Trademark Holdings LLC, their affiliates nor their third party licensors shall have any liability for any errors, omissions, or interruptions of any index or the data included therein.

Challenges in Interpreting Measures of Longer-Term Inflation Expectations

In many economic models, inflation expectations are an important determinant of the behavior of actual inflation. For this reason, measures of inflation expectations are widely followed. Although none of the available measures is perfect, surveys of individuals, economists, and professional forecasters all shed some light on the inflation expectations of different groups. For the most part, these survey-based measures have been quite stable in recent years in the United States. Many analysts credit that stability with helping to keep the variation in actual inflation fairly limited despite pressures (such as the deep recession and sharp changes in energy prices) that might have had the potential to induce more substantial and long-lasting changes in inflation.

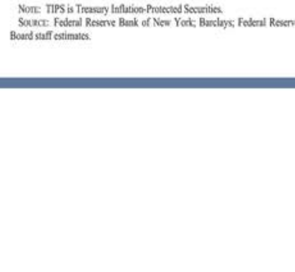
Measures of expected inflation can also be derived from financial instruments whose payouts are linked to inflation. For example, inflation compensation implied by Treasury Inflation-Protected Securities (TIPS), known as the TIPS breakeven inflation rate, is defined as the difference, at comparable maturities, between yields on nominal Treasury securities and yields on TIPS, which are indexed to headline consumer price index (CPI) inflation. Inflation swaps—contracts in which one party makes payments of certain fixed nominal amounts in exchange for cash flows that are indexed to cumulative CPI inflation over some horizon—provide alternative measures of inflation compensation. These measures of inflation compensation provide information about market participants' expectations of inflation, but that information is generally obscured by other sources of variation.

Both of those market-based measures of inflation compensation have declined noticeably since early August (figure A). Focusing on inflation compensation 5 to 10 years ahead is useful, particularly for monetary policy, because it gives a sense of where market participants expect inflation to settle in the long term after developments influencing inflation in the short term have run their course. The 5-to-10-year-forward inflation compensation measure computed from TIPS fell from an annual rate of around 2½ percent in early August to below 2 percent in January; over the same period, the swaps-based measure fell from around 2¾ percent to a little more than 2 percent. Market participants have offered several potential explanations for these declines, including the effects of the plunge in oil prices and soft readings on overall and core inflation as well as concerns about the global growth outlook and disinflationary pressure abroad.[1]

The Federal Open Market Committee's (FOMC) 2 percent inflation objective is stated in terms of the price index for personal consumption expenditures (PCE), and PCE price inflation tends to run a few tenths of a percentage point lower, on average, than the CPI inflation used in pricing TIPS and inflation swaps. Thus, if these recent readings on inflation compensation could be interpreted as direct measures of expected CPI inflation, then they would probably correspond to expectations for PCE inflation that are lower than the Committee's objective. Recent FOMC statements have noted that the Committee will monitor both survey measures and these market-based inflation compensation measures closely.

1. In support of the latter explanation, market participants also noted the decline of inflation compensation abroad, in particular in the euro area. One possible reason for the effects of oil prices and realized inflation on longer-term inflation compensation is that, in response to changes in the intermediate-term inflation outlook, investors are reportedly more likely to adjust their positions in the more recently issued, and thus more liquid, longer-term TIPS rather than the older-vintage TIPS with shorter remaining maturities.

A. 5-to-10-year-forward inflation compensation



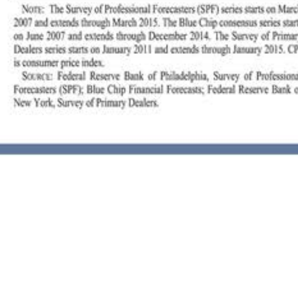
Note: TIPS is Treasury Inflation-Protected Securities.
Source: Federal Reserve Bank of New York; Barclays; Federal Reserve Board staff estimates.

Inflation compensation is distinct from inflation expectations, however, as both TIPS- and swaps-based measures of inflation compensation reflect not only expected inflation, but also an inflation risk premium—the compensation that holders of nominal securities demand for bearing inflation risk—as well as other premiums driven by liquidity differences and shifts in the relative supply and demand of nominal versus inflation-indexed securities. Federal Reserve System staff maintain several term structure models aimed at disentangling the various components of inflation compensation and providing estimates of inflation expectations and risk premiums.[2] Most staff models suggest that 5-to-10-year inflation expectations have remained relatively stable since last summer. Instead, the models tend to attribute at least part of the decline in inflation compensation to some reduction in inflation risk premiums and the effects of the other factors included in the models. However, these models cannot fully explain the recent decline in inflation compensation.

Distributions of future inflation derived from surveys and inflation options also display an interesting divergence. Distributions of inflation 5 to 10 years ahead that are derived from surveys of primary dealers have remained stable since last summer—consistent with the stability of the other survey measures cited earlier. In contrast, information gleaned from 10-year inflation options (that is, caps and floors, which pay the holder when inflation is higher or lower than specified levels) suggests that investors may have recently become more concerned about lower inflation outcomes and less concerned about higher inflation outcomes. This shift could reflect an increase in the investors' perceived likelihood of low inflation outcomes, but it could also reflect an increased willingness to pay higher premiums for insurance against such outcomes as well as other possible factors depressing long-horizon inflation compensation.

Thus, the results from the Federal Reserve's staff models are consistent with readings from surveys of primary dealers, economists, professional forecasters, and consumers, all of which indicate that longer-run inflation expectations have remained generally stable (figure B). However, given the uncertainties in inferring inflation expectations from the market measures of inflation compensation, one cannot rule out a decline in inflation expectations among market participants.

B. Survey measures of longer-term inflation expectations

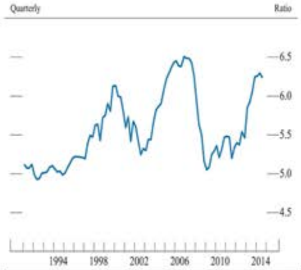


NOTE: The Survey of Professional Forecasters (SPF) series starts on March 2007 and extends through March 2015. The Blue Chip consensus series starts on June 2007 and extends through December 2014. The Survey of Primary Dealers series starts on January 2011 and extends through January 2015. CPI is consumer price index.

SOURCE: Federal Reserve Bank of Philadelphia, Survey of Professional Forecasters (SPF); Blue Chip Financial Forecasts; Federal Reserve Bank of New York, Survey of Primary Dealers.

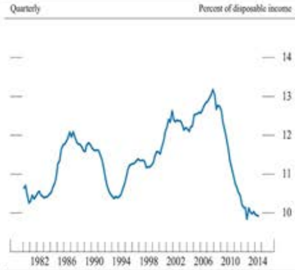
2. For further details, see Michael Abrahams, Tobias Adrian, Richard Crump, and Emanuel Moench (2012), "Decomposing Real and Nominal Yield Curves," Federal Reserve Bank of New York Staff Reports, no. 570 (New York: FRB New York, September, revised October 2013), www.newyorkfed.org/research/staff_reports/sr570.html; Jens H.E. Christensen, Jose A. Lopez, and Glenn D. Rudebusch (2010), "Inflation Expectations and Risk Premiums in Arbitrage-Free Model of Nominal and Real Bond Yields," *Journal of Money, Credit and Banking*, vol. 42 (September, issue supplement s1), pp. 143–78; Stefania D'Amico, Don H. Kim, and Min Wei (2014), "Tips from TIPS: The Informational Content of Treasury Inflation-Protected Security Prices," Finance and Economics Discussion Series 2014-24 (Washington: Board of Governors of the Federal Reserve System, January), www.federalreserve.gov/pubs/feds/2014/201424/201424pap.pdf; Andrea Ajello, Luca Benzoni, and Olena Chyruk (2012), "Core and 'Crust': Consumer Prices and the Term Structure of Interest Rates," available at SSRN: http://ssrn.com/abstract=1851906 or http://dx.doi.org/10.2139/ssrn.1851906; and Joseph G. Haubrich, George G. Pennacchi, and Peter Ritchken (2012), "Inflation Expectations, Real Rates, and Risk Premia: Evidence from Inflation Swaps," *Review of Financial Studies*, vol. 25 (5), pp. 1588–629.

12. Wealth-to-income ratio



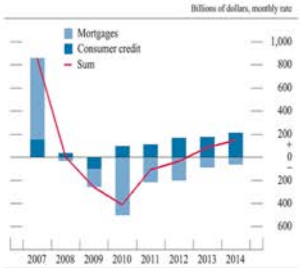
NOTE: The data extend through 2014:Q3. The series is the ratio of household net worth to disposable personal income.
SOURCE: For net worth, Federal Reserve Board, Statistical Release Z.1, "Financial Accounts of the United States"; for income, Department of Commerce, Bureau of Economic Analysis.

13. Household debt service



NOTE: The data extend through 2014:Q3. Debt service payments consist of estimated required payments on outstanding mortgage and consumer debt.
SOURCE: Federal Reserve Board, Statistical Release, "Household Debt Service and Financial Obligations Ratios."

14. Changes in household debt



NOTE: Changes are calculated from year-end to year-end, except 2014 changes, which are calculated from Q3 to Q3.
SOURCE: Federal Reserve Board, Statistical Release Z.1, "Financial Accounts of the United States."

six times the value of disposable personal income (figure 12).

Coupled with low interest rates, the rise in incomes has lowered debt payment burdens for many households. The household debt service ratio—that is, the ratio of required principal and interest payments on outstanding household debt to disposable personal income—has remained at a very low level by historical standards (figure 13).

. . . and increased credit availability for consumers

Consumer credit continued to expand through late 2014, as auto and student loans have remained available even to borrowers with lower credit scores (figure 14). In addition, credit cards have become somewhat more accessible to individuals on the lower end of the credit spectrum, and overall credit card debt increased moderately last year.

Consumer confidence has moved up

Consistent with the improvement in the labor market and the fall in energy prices, indicators of consumer sentiment moved up noticeably in the second half of last year. The University of Michigan Surveys of Consumers' index of consumer sentiment—which incorporates households' views about their own financial situations as well as broader economic conditions—has moved up strongly, on net, in recent months and is now close to its long-run average (figure 15). The Michigan survey's measure of households' expectations of real income changes in the year ahead has also continued to trend up over the past several months, perhaps reflecting the fall in gasoline prices. However, this measure remains substantially below its historical average and suggests a more guarded outlook than the headline sentiment index.

However, the pace of homebuilding has improved only slowly

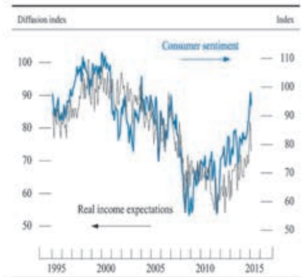
After advancing reasonably well in 2012 and early 2013, the recovery in residential construction activity has slowed markedly. Single-family housing starts only edged up in 2014, and multifamily construction activity was also little changed (figure 16). And sales of both new and existing homes were flat, on net, last year (figure 17). In all, real residential investment rose only 2½ percent in 2014, and it remains well below its pre-recession peak. The weak recovery in construction likely relates to the rate of household formation, which, notwithstanding tentative signs of a recent pickup, has generally stayed very low despite the improvement in the labor market.

Lending policies for home purchases remained tight overall, although there are some indications that mortgage credit has started to become more widely accessible. Over the course of 2014, the fraction of home-purchase mortgages issued to borrowers with credit scores on the lower end of the spectrum edged up. Additionally, in the Senior Loan Officer Opinion Survey on Bank Lending Practices (SLOOS), several large banks reported having eased lending standards on prime home-purchase loans in the third and fourth quarters of last year.[2] In January, the Federal Housing Administration reduced its mortgage insurance premiums by about one-third of the level that had prevailed during the past four years—a step that may lower the cost of credit for households with small down payments and low credit scores. Even so, mortgages have remained difficult to obtain for many households.

Meanwhile, for borrowers who can qualify for a mortgage, the cost of credit is low. After rising appreciably around mid-2013, mortgage interest rates have since retraced much of those increases. The 30-year fixed mortgage rate declined roughly 60 basis points in 2014, and it has edged down further, on net, this year to a level not far from its all-time low

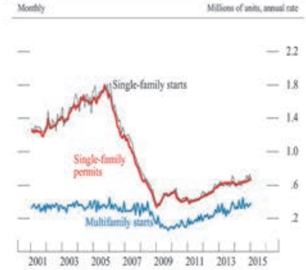
2. The SLOOS is available on the Board's website at www.federalreserve.gov/boarddocs/snloansurvey.

15. Indexes of consumer sentiment and income expectations



Note: The data are monthly and extend through February 2015. Consumer sentiment is indexed to 100 in 1966. Real income expectations are calculated as the net percent of survey respondents expecting family income to go up more than prices during the next year or two.
Source: University of Michigan Surveys of Consumers.

16. Private housing starts and permits

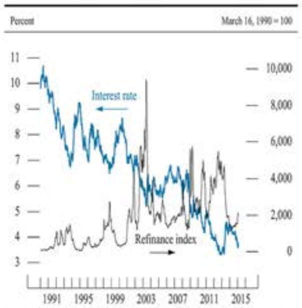


Source: Department of Commerce, Bureau of the Census.

17. New and existing home sales

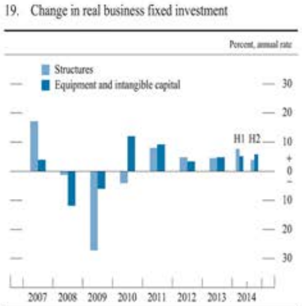
Note: The data extend through December 2014. "Existing home sales" includes single-family, condo, townhome, and co-op sales.
Source: For new single-family home sales, Census Bureau; for existing home sales, National Association of Realtors.

18. Mortgage interest rate and mortgage refinance index



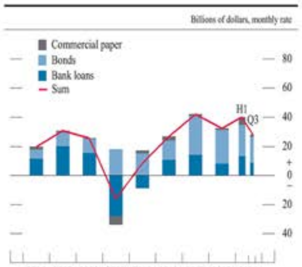
NOTE: The interest rate data are for 30-year fixed-rate mortgages and are weekly through February 18, 2015. The refinance index data are a seasonally adjusted 4-week moving average through February 13, 2015.
SOURCE: For interest rate data, Freddie Mac Primary Mortgage Market Survey, from Freddie Mac (Federal Home Loan Mortgage Corporation), www.freddiemac.com/pmms; for refinance index data, the Mortgage Bankers Association.

19. Change in real business fixed investment



SOURCE: Department of Commerce, Bureau of Economic Analysis.

20. Selected components of net financing for nonfinancial businesses



NOTE: The data for the components except bonds are seasonally adjusted.
SOURCE: Federal Reserve Board, Statistical Release Z.1, "Financial Accounts of the United States."

in 2012 (figure 18). Likely related to the most recent decline in mortgage rates, refinancing activity rose modestly in January.

Overall business investment has moved up, but investment in the energy sector is starting to be affected by the drop in oil prices

Business fixed investment rose at an annual rate of 5¼ percent in the second half of 2014, close to the rate of increase seen in the first half. Spending on E&I capital rose at an annual rate of about 6 percent, while spending on nonresidential structures moved up about 4 percent (figure 19). Business investment has been supported by strengthening final demand as well as by low interest rates and generally accommodative financial conditions. Regarding nonresidential structures, vacancy rates for existing properties have been declining, and financing conditions for new construction have eased further—both factors that bode well for future construction. More recently, however, the steep decline in the number of drilling rigs in operation suggests that a sharp falloff in the drilling and mining component of investment in nonresidential structures may be under way.

Corporate financing conditions were generally favorable

The financial condition of large nonfinancial firms generally remained solid in the second half of last year; profitability stayed high, and default rates on nonfinancial corporate bonds were generally very low. Nonfinancial firms have continued to raise funds through capital markets at a robust pace, given sturdy corporate credit quality, historically low interest rates on corporate bonds, and highly accommodative lending conditions for most firms (figures 20 and 21). Bond issuance by investment-grade nonfinancial firms, and syndicated lending to those firms, have both been particularly strong. However, speculative-grade issuance in those markets, which had remained elevated for most of 2014, diminished late in the year, because volatility increased and spreads widened and perhaps also because of greater scrutiny by regulators of syndicated leveraged loans with weaker credit quality and lower repayment capacity.

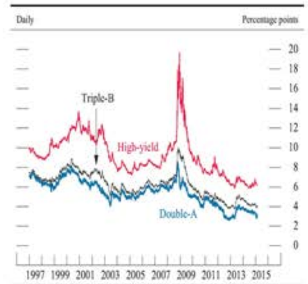
Credit also was readily available to most bank-dependent businesses. According to the October 2014 and January 2015 SLOOS reports, banks generally continued to ease price and nonprice terms on commercial and industrial (C&I) loans to firms of all sizes in the second half of 2014. That said, in the fourth quarter, several banks reported having tightened lending policies for oil and gas firms or, more broadly, in response to legislative, supervisory, or accounting changes. In addition, although overall C&I loans on banks' books registered substantial increases in the second half of 2014, loans to businesses in amounts of $1 million or less—a proxy for lending to small businesses—increased only modestly. The weak growth in these small loans appears largely due to sluggish demand; however, bank lending standards to small businesses are still reportedly somewhat tighter than the midpoint of their range over the past decade despite considerable loosening over the past few years.

Net exports held down second-half real GDP growth slightly

Exports increased at a modest pace in the second half of 2014, held back by lackluster growth abroad as well as the appreciation of the dollar. Import growth was also relatively subdued, despite the impetus from the stronger dollar, and was well below the pace observed in the first half (figure 22). All told, real net trade was a slight drag on real GDP growth in the second half of 2014.

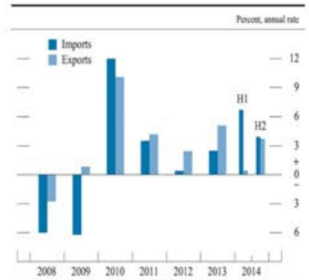
The current account deficit was little changed in the third quarter of 2014 and, at 2¼ percent of nominal GDP, was near its narrowest reading since the late 1990s (figure 23). The current account deficit in the first three quarters of 2014 was financed mainly by purchases of Treasury and corporate securities

21. Corporate bond yields, by securities rating



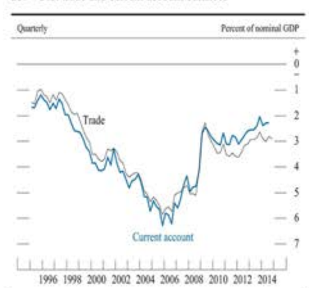
NOTE: The yields shown are yields on 10-year bonds.
SOURCE: BofA Merrill Lynch Global Research, used with permission.

22. Change in real imports and exports of goods and services



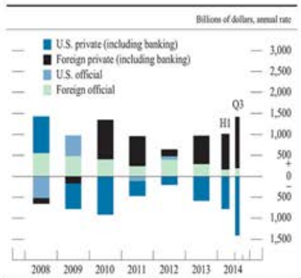
SOURCE: Department of Commerce, Bureau of Economic Analysis.

23. U.S. trade and current account balances



NOTE: The data for the current account extend through 2014:Q3. GDP is gross domestic product.
SOURCE: Department of Commerce, Bureau of Economic Analysis.

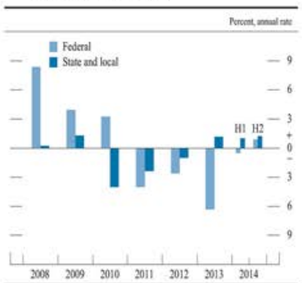
24. U.S. net financial inflows



NOTE: Negative numbers indicate a balance of payments outflow, generated when U.S. residents, on net, purchase foreign assets or when foreign residents, on net, sell U.S. assets. A negative number for "U.S. private" or "U.S. official" indicates an increase in U.S. residents' holdings of foreign assets. U.S. official flows include the foreign currency acquired when foreign central banks draw on their swap lines with the Federal Reserve.

SOURCE: Department of Commerce, Bureau of Economic Analysis.

25. Change in real government expenditures on consumption and investment



SOURCE: Department of Commerce, Bureau of Economic Analysis.

by foreign private investors (figure 24). In contrast, the pace of foreign official purchases in the first three quarters of the year was the slowest in more than a decade, reflecting a significant slowdown in reserve accumulation by emerging market economies (EMEs).

Federal fiscal policy was less of a drag on GDP . . .

Fiscal policy at the federal level had been a factor restraining GDP growth for several years, especially in 2013. In 2014, however, the contractionary effects of tax and spending changes eased appreciably as the restraining effects of the 2013 tax increases abated and there was a slowing in the declines in federal purchases due to sequestration and the Budget Control Act of 2011 (figure 25). Moreover, some of the overall drag on demand was offset in 2014 by an increase in transfers resulting from the Affordable Care Act.

The federal unified deficit narrowed further last year, reflecting both the previous years' spending cuts and an increase in tax receipts resulting from the ongoing economic expansion (figure 26). The budget deficit was 2¾ percent of GDP for fiscal year 2014, and the Congressional Budget Office projects that it will be about 2½ percent in 2015. As a result, overall federal debt held by the public stabilized as a share of GDP in 2014, albeit at a relatively high level (figure 27).

. . . and state and local government expenditures are also turning up

The expansion of economic activity has also led to continued slow improvements in the fiscal position of most state and local governments. Consistent with improving finances, states and localities expanded employment rolls in 2014 (figure 28). Furthermore, state and local expenditures on construction projects rose a touch last year following several years of declines.

Financial Developments

The expected path for the federal funds rate flattened

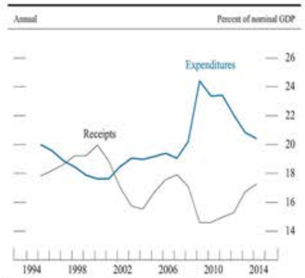
Market participants seemed to judge the incoming domestic economic data since the middle of last year, especially the employment reports, as supporting expectations for continued economic expansion in the United States; however, concerns about the foreign economic outlook weighed on investor sentiment. On balance, market-based measures of the expected (or mean) path of the federal funds rate through late 2017 have flattened, but the expected timing of the initial increase in the federal funds rate from its current target range was about unchanged. In addition, according to the results of the most recent Survey of Primary Dealers and the Survey of Market Participants, both conducted by the Federal Reserve Bank of New York just prior to the January FOMC meeting, respondents judged that the initial increase in the target federal funds rate was most likely to occur around mid-2015, little changed from the results of those surveys from last June.[3] Meanwhile, in part because the passage of time brought the anticipated date of the initial increase in the federal funds rate closer, measures of policy rate uncertainty based on interest rate derivatives edged higher, on net, from their mid-2014 levels.

Longer-term Treasury yields and other sovereign benchmark yields declined

Yields on longer-term Treasury securities have continued to move down since the middle of last year on net (figure 29). In particular, the yields on 10- and 30-year nominal Treasury securities declined about 40 basis points and 60 basis points, respectively, from their levels at the end of June 2014. The decreases in

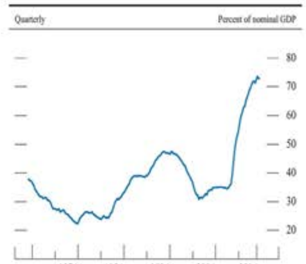
3. The results of the Survey of Primary Dealers and of the Survey of Market Participants are available on the Federal Reserve Bank of New York's website at www.newyorkfed.org/markets/primarydealer_survey_questions.html and www.newyorkfed.org/markets/survey_market_participants.html, respectively.

26. Federal receipts and expenditures



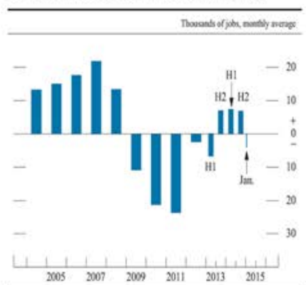
Note: The receipts and expenditures data are on a unified-budget basis and are for fiscal years (October through September); gross domestic product (GDP) data are for the four quarters ending in Q3.
Source: Office of Management and Budget.

27. Federal government debt held by the public



Note: The data extend through 2014:Q3. The data for gross domestic product (GDP) are at an annual rate. Debt held by the public is debt held at the end of the period.
Source: Department of Commerce, Bureau of Economic Analysis; Department of the Treasury, Bureau of the Fiscal Service.

28. State and local government employment change



Source: Department of Labor, Bureau of Labor Statistics.

29. Yields on nominal Treasury securities

NOTE: The Treasury ceased publication of the 30-year constant maturity series on February 18, 2002, and resumed that series on February 9, 2006.
SOURCE: Department of the Treasury.

longer-term yields were driven especially by reductions in longer-horizon forward rates. For example, the 5-year forward rate 5 years ahead dropped about 80 basis points over the same period. Long-term benchmark sovereign yields in advanced foreign economies (AFEs) have also moved down significantly in response to disappointing growth and very low and declining rates of inflation in a number of foreign countries as well as the associated actual and anticipated changes in monetary policy abroad.

The declines in longer-term Treasury yields and long-horizon forward rates seem to largely reflect reductions in term premiums—the extra return investors expect to obtain from holding longer-term securities as opposed to holding and rolling over a sequence of short-term securities for the same period. Market participants pointed to several factors that may help to explain the reduction in term premiums. First, very low and declining AFE yields and safe-haven flows associated with the deterioration in the foreign economic outlook likely have increased demand for Treasury securities. Second, the weaker foreign economic outlook coupled with the steep decline in oil prices may have led investors to put higher odds on scenarios in which U.S. inflation remains quite low for an extended period. Investors may see nominal long-term Treasury securities as an especially good hedge against such risks. Finally, market participants may have increased the probability they attach to outcomes in which U.S. economic growth is persistently subdued. Indeed, the 5-year forward real yield 5 years ahead, obtained from yields on Treasury Inflation-Protected Securities, has declined further, on net, since the middle of last year and stands well below levels commonly cited as estimates of the longer-run real short rate.

Consistent with moves in the yields on longer-term Treasury securities, yields on 30-year agency mortgage-backed securities (MBS)—an important determinant of mortgage interest rates—decreased about 30 basis points, on balance, over the second half of 2014 and early 2015 (figure 30).

Liquidity conditions in Treasury and agency MBS markets were generally stable . . .

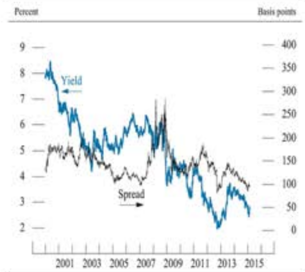
On balance, indicators of Treasury market functioning remained stable over the second half of 2014 even as the Federal Reserve trimmed the pace of its asset purchases and ultimately brought the purchase program to a close at the end of October. The Treasury market experienced a sharp drop in yields and significantly elevated volatility on October 15, as technical factors reportedly amplified price movements following the release of the somewhat weaker-than-expected September U.S. retail sales data. However, market conditions recovered quickly and liquidity measures, such as bid-asked spreads, have been generally stable since then. Moreover, Treasury auctions generally continued to be well received by investors.

As in the Treasury market, liquidity conditions in the agency MBS market were generally stable, with the exception of mid-October. Dollar-roll-implied financing rates for production coupon MBS—an indicator of the scarcity of agency MBS for settlement—suggested limited settlement pressures in these markets over the second half of 2014 and early 2015 (figure 31).

. . . and short-term funding markets also continued to function well as rates moved slightly higher overall

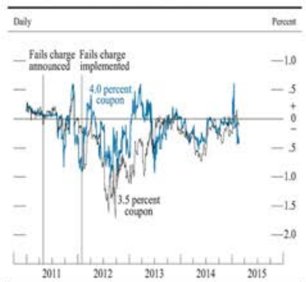
Conditions in short-term dollar funding markets also remained stable during the second half of 2014 and early 2015. Both unsecured and secured money market rates moved modestly higher late in 2014 but remained close to their averages since the federal funds rate reached its effective lower bound. Unsecured offshore dollar funding markets generally did not exhibit signs of

30. Yield and spread on agency mortgage-backed securities



NOTE: The data are daily. Yield shown is for the Fannie Mae 30-year current coupon, the coupon rate at which new mortgage-backed securities would be priced at par, or face, value. Spread shown is to the average of the 5- and 10-year nominal Treasury yields.
SOURCE: Department of the Treasury; Barclays.

31. Dollar-roll-implied financing rates (front month), Fannie Mae 30-year current coupon

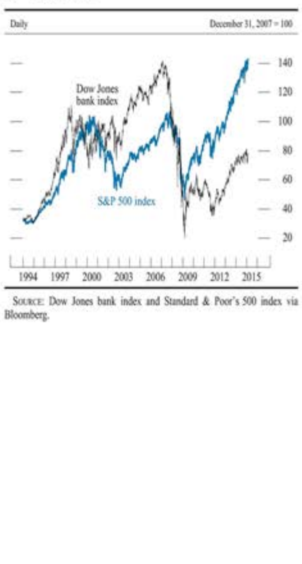


SOURCE: J.P. Morgan.

stress, and the repurchase agreement, or repo, market functioned smoothly with modest year-end pressures.

Money market participants continued to focus on the ongoing testing of the Federal Reserve's monetary policy tools. The offering rate in the overnight reverse repurchase agreement (ON RRP) exercise has continued to provide a soft floor for other rates on secured borrowing, and the term RRP testing operations that were conducted in December and matured in early January seemed to help alleviate year-end pressures in money markets. For a detailed discussion of the testing of monetary policy tools, see the box "Additional Testing of Monetary Policy Tools" in Part 2.

32. Equity prices



SOURCE: Dow Jones bank index and Standard & Poor's 500 index via Bloomberg.

Broad equity price indexes rose despite higher volatility, while risk spreads on corporate debt widened

Over the second half of 2014 and early 2015, broad measures of U.S. equity prices increased further, on balance, but stock prices for the energy sector declined substantially, reflecting the sharp drops in oil prices (figure 32). Although increased concerns about the foreign economic outlook seemed to weigh on risk sentiment, the generally positive tone of U.S. economic data releases as well as declining longer-term interest rates appeared to provide support for equity prices. Overall equity valuations by some conventional measures are somewhat higher than their historical average levels, and valuation metrics in some sectors continue to appear stretched relative to historical norms. Implied volatility for the S&P 500 index, as calculated from options prices, increased moderately, on net, from low levels over the summer.

Corporate credit spreads, particularly those for speculative-grade bonds, widened from the fairly low levels of last summer, in part because of the underperformance of energy firms. Overall, corporate bond spreads across the credit spectrum have been near their historical median levels recently. For further discussion of asset prices and other financial stability issues, see the box "Developments Related to Financial Stability."

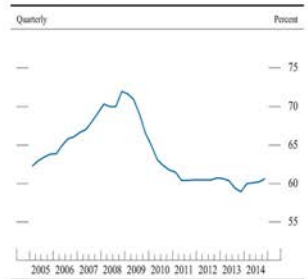
Bank credit and the M2 measure of the money stock continued to expand

Aggregate credit provided by commercial banks increased at a solid pace in the second half of 2014 (figure 33). The expansion in bank credit was mainly driven by moderate loan growth coupled with continued robust expansion of banks' holdings of U.S. Treasury securities, which was reportedly influenced by efforts of large banks to meet the new Basel III Liquidity Coverage Ratio requirements. The growth of loans on banks' books was generally consistent with the SLOOS reports of increased loan demand and further easing of lending standards for many loan categories over the second half of 2014. Meanwhile, delinquency and charge-off rates fell across most major loan types.

Measures of bank profitability were little changed in the second half of 2014, on net, and remained below their historical averages (figure 34). Equity prices of large domestic bank holding companies (BHCs) have increased moderately, on net, since the middle of last year (figure 32). Credit default swap (CDS) spreads for large BHCs were about unchanged.

The M2 measure of the money stock has increased at an average annualized rate of about 5½ percent since last June, below the pace registered in the first half of 2014 and about in line with the pace of nominal GDP. The deceleration was driven by a moderation in the growth rate of liquid deposits in the banking sector relative to the first half of 2014. Although demand for currency weakened in the third quarter of 2014 relative to the first half of the year, currency growth has been strong since November.

33. Ratio of total commercial bank credit to nominal gross domestic product



Source: Federal Reserve Board, Statistical Release H.8, "Assets and Liabilities of Commercial Banks in the United States"; Department of Commerce, Bureau of Economic Analysis.

34. Profitability of bank holding companies

Note: The data, which are seasonally adjusted, are quarterly.
Source: Federal Reserve Board, FR Y-9C, Consolidated Financial Statements for Bank Holding Companies.

Developments Related to Financial Stability

The financial vulnerabilities in the U.S. financial system overall have remained moderate since the previous *Monetary Policy Report*. In the past few years, capital and liquidity positions in the banking sector have continued to improve, net wholesale short-term funding in the financial sector has decreased substantially, and aggregate leverage of the private nonfinancial sector has not picked up. However, valuation pressures are notable in some asset markets, although they have eased a little on balance. Leverage at lower-rated nonfinancial firms has become more pronounced. Recent developments in Greece have rekindled concerns about the country defaulting and exiting the euro system.

With regard to asset valuations, price-to-earnings and price-to-sales ratios are somewhat elevated, suggesting some valuation pressures. However, estimates of the equity premium remain relatively wide, as the long-run expected return on equity exceeds the low real Treasury yield by a notable margin, suggesting that investors still expect somewhat higher-than-average compensation relative to historical standards for bearing the additional risk associated with holding equities. Risk spreads for corporate bonds have widened over recent months, especially for speculative-grade firms, in part because of concerns about the credit quality of energy-related firms, though yields remain near historical lows, reflecting low term premiums. Residential real estate valuations appear within historical norms, with recent data pointing to some cooling of house price gains in regions that recently experienced rapid price appreciation. However, valuation pressures in the commercial real estate market may have increased in recent quarters as prices have risen relative to rents, and underwriting standards in securitizations have weakened somewhat, though debt growth remains moderate.

The private nonfinancial sector credit-to-GDP ratio has declined to roughly its level in the mid-2000s. At lower-rated and unrated nonfinancial businesses, however, leverage has continued to increase with the rapid growth in high-yield bond issuance and leveraged loans in recent years. The underwriting quality of leveraged loans arranged or held by banking institutions in 2014:Q4 appears to have improved slightly, perhaps in response to the stepped-up enforcement of the leveraged lending guidance. However, new deals continue to show signs of weak underwriting terms and heightened leverage that are close to levels preceding the financial crisis.

As a result of steady improvements in capital and liquidity positions since the financial crisis, U.S. banking firms, in aggregate, appear to be better positioned to absorb potential shocks—such as those related to litigation, falling oil prices, and financial contagion originating abroad—and to meet strengthening credit demand. The sharp decline in oil prices, if sustained, may lead to credit strains for some banks with concentrated exposures to the energy sector, but at banks that are more diversified, potential losses are likely to be offset by the positive effects of lower oil prices on the broader economy. Thirty-one large bank holding companies (BHCs) are currently undergoing their annual stress tests, the results of which are scheduled to be released in March.

Leverage in the nonbank financial sector appears, on balance, to be at moderate levels. New securitizations, which contribute to financial sector leverage, have been boosted by issuance of commercial mortgage-backed securities (CMBS) and collateralized loan obligations (CLOs), which remained robust amid continued reports of relatively accommodative underwriting standards for the underlying assets. That said, the risk retention rules finalized in October, which require issuers to retain at least 5 percent of any securitizations issued, have the potential to affect market activity, especially in the private-label residential mortgage-backed securities, non-agency CMBS, and CLO sectors.

Reliance on wholesale short-term funding by nonbank financial institutions has declined significantly in recent years and is low by historical standards. However, prime money market funds with a fixed net asset value remain vulnerable to investor runs if there is a fall in the market value of their assets. Furthermore, the growth of bond mutual funds and exchange-traded funds (ETFs) in recent years means that these funds now hold a much higher fraction of the available stock of relatively less liquid assets—such as high-yield corporate debt, bank loans, and international debt—than they did before the financial crisis. As mutual funds and ETFs may appear to offer greater liquidity than the markets in which they transact, their growth heightens the potential for a forced sale in the underlying markets if some event were to trigger large volumes of redemptions.

Since the previous *Monetary Policy Report*, the Federal Reserve has taken further steps to improve the resiliency of the financial system. First, the Federal Reserve Board and other federal banking agencies finalized several rules to enhance the capital and liquidity positions of large banking organizations. In particular, a final rule on a liquidity coverage ratio was issued, requiring large and internationally active banking organizations to hold a certain minimum amount of high-quality liquid assets, such as central bank reserves and government and corporate debt that can be converted easily and quickly into cash. Another final rule was adopted to modify the definition of the supplementary leverage ratio in a manner consistent with the recent changes agreed to by the Basel Committee on Banking Supervision. The technical modifications adjust the amount of certain off-balance-sheet items included in the ratio, such as credit derivatives, repurchase agreement–style transactions, and lines of credit. The changes strengthen the ratio by more appropriately capturing a banking organization's on- and off-balance-sheet exposures and, based on estimates, would increase capital requirements, on balance, across banking firms.

In addition, the Federal Reserve issued several rules to conform to Dodd-Frank Act mandates. A final rule was issued to implement section 622 of the act, which generally prohibits a financial company (defined generally as an insured depository institution or depository institution holding company) from combining with another company if the resulting company's liabilities would exceed 10 percent of the aggregate consolidated liabilities of all such financial companies. Another final rule, issued jointly by several federal agencies, requires the sponsors of asset-backed securities (ABS) to retain not less than 5 percent of the credit risk of the assets collateralizing the ABS issuance unless certain underwriting criteria on the securitized assets are met. The rule also generally prohibits the sponsor from transferring or hedging that credit risk. Moreover, several federal agencies jointly issued a proposed rule establishing minimum margin requirements for certain swap contracts that are not cleared through central counterparties.

In addition, the Federal Reserve proposed a rule to further strengthen the capital positions of the most systemically important U.S. bank holding companies (BHCs). The proposal establishes a methodology to identify whether a U.S. BHC is a global systemically important banking organization (GSIB) and so would be subject to a risk-based capital surcharge calibrated based on its systemic profile. A GSIB would be required to calculate its capital surcharge under two methods and would be subject to the higher of the two surcharges. The first method is consistent with the Basel frame work, which results in capital surcharges ranging from 1.0 to 2.5 percent. The second method, which takes into account a measure of the firm's' reliance on short-term wholesale funding, results in capital surcharges ranging from 1.0 to 4.5 percent. Failure to maintain the capital surcharge would subject the GSIB to restrictions on capital distributions and discretionary bonus payments.

Finally, the Federal Reserve invited public comment on enhanced prudential standards for the regulation and supervision of General Electric Capital Corporation (GECC), a nonbank financial company that the Financial Stability Oversight Council has designated for supervision by the Federal Reserve Board. In light of the substantial similarity of GECC's activities and risk profile to those of a similarly sized BHC, the Federal Reserve is proposing to apply enhanced prudential standards to GECC similar to those applied to large BHCs.

Municipal bond markets functioned smoothly, but some issuers remained strained

Credit conditions in municipal bond markets have generally remained stable since the middle of last year. Over that period, the MCDX—an index of CDS spreads for a broad portfolio of municipal bonds—and ratios of yields on 20-year general obligation municipal bonds to those on longer-term Treasury securities increased slightly.

Nevertheless, significant financial strains were still evident for some issuers. Puerto Rico, with speculative-grade-rated general obligation bonds, continued to face challenges from subdued economic performance, severe indebtedness, and other fiscal pressures. Meanwhile, the City of Detroit emerged from bankruptcy late in 2014 after its debt restructuring plan was approved by a federal judge.

International Developments

Bond yields in the advanced foreign economies continued to decline . . .

35. 10-year nominal benchmark yields in advanced foreign economies

SOURCE: Bloomberg.

As noted previously, long-term sovereign yields in the AFEs moved down further during the second half of 2014 and into early 2015 on continued low inflation readings abroad and heightened concerns over the strength of foreign economic growth as well as amid substantial monetary policy accommodation (figure 35). German yields fell to record lows, as the European Central Bank (ECB) implemented new liquidity facilities, purchased covered bonds and asset-backed securities, and announced it would begin buying euro-area sovereign bonds. Specifically, the ECB said that it would purchase €60 billion per month of euro-area public and private bonds through at least September 2016. Japanese yields also declined, reflecting the expansion by the Bank of Japan (BOJ) of its asset purchase program. In the United Kingdom, yields fell as data showed declining inflation and some moderation in economic growth, although they have retraced a little of that move in recent weeks, in part as market sentiment toward the U.K. outlook appears to have improved somewhat. In emerging markets, yields were mixed—falling, for the most part, in Asia and generally rising modestly in Latin America—as CDS spreads widened amid growing credit concerns, particularly in some oil-exporting countries.

. . . while the dollar has strengthened markedly

The broad nominal value of the dollar has increased markedly since the middle of 2014, with the U.S. dollar appreciating against almost all currencies (figure 36). The increase in the value of the dollar was largely driven by additional monetary easing abroad and rising concerns about foreign growth—forces similar to those that drove benchmark yields lower—in the face of expectations of solid U.S. growth and the anticipated start of monetary tightening in the United States later this year. Both the euro and the yen have depreciated about 20 percent against the dollar since mid-2014. Notwithstanding the sharp nominal appreciation of the dollar since mid-2014, the real value of the dollar, measured against a broad basket of currencies, is currently somewhat below its historical average since 1973 and well below the peak it reached in early 1985 (figure 37).

Foreign equity indexes were mixed over the period (figure 38). Japanese equities outperformed other AFE indexes, helped by the BOJ's asset purchase expansion. Euro-area equities are up modestly from their mid-2014 levels, boosted recently by monetary easing. However, euro-area bank shares substantially underperformed broader indexes, partly reflecting low profitability, weak operating environments, and lingering vulnerabilities to economic and financial shocks. EME equities indexes were mixed, with most emerging Asian indexes rising and some of the major Latin American indexes moving down.

36. U.S. dollar exchange rate against broad index and selected major currencies

NOTE: The data are in foreign currency units per dollar.
SOURCE: Federal Reserve Board, Statistical Release H.10, "Foreign Exchange Rates."

37. Broad real value of the dollar

NOTE: The data are in foreign currency units per dollar.
SOURCE: Federal Reserve Board, Statistical Release H.10, "Foreign Exchange Rates."

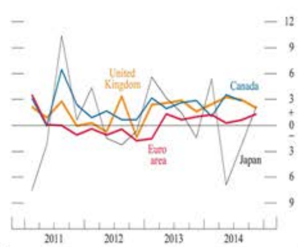
38. Equity indexes for selected foreign economies

SOURCE: For emerging markets, Morgan Stanley Emerging Markets MXEF Capital Index; for the euro area, Dow Jones Euro STOXX Index; for Japan, Tokyo Stock Price Index (TOPIX).

90

39. Real gross domestic product growth in selected advanced foreign economies

Quarterly — Percent, annual rate



NOTE: The data for Canada extend through 2014:Q3. The data for the United Kingdom, the euro area, and Japan extend through 2014:Q4.

SOURCE: For Canada, Statistics Canada; for the United Kingdom, Office for National Statistics; for the euro area, Eurostat; for Japan, Cabinet Office, Government of Japan.

Economic growth in the advanced foreign economies, while still generally weak, firmed toward the end of the year

Economic growth in the AFEs, which was weak in the first half of 2014, firmed toward the end of the second half of the year, supported in part by lower oil prices and more accommodative monetary policies (figure 39). The euro-area economy barely grew in the third quarter and unemployment remained near record highs, but the pace of economic activity moved up in the fourth quarter. Notwithstanding more supportive monetary policy and the recent pickup in euro-area growth, negotiations over additional financial assistance for Greece have the potential to trigger adverse market reactions and resurrect financial stresses that might impair growth in the broader euro-area economy. Japanese real GDP contracted again in the third quarter, following a tax hike–induced plunge in the second quarter, but it rebounded toward the end of the year as exports and household spending increased. In contrast, economic activity in the United Kingdom and Canada was robust in the third quarter but moderated in the fourth quarter.

The fall in oil prices and other commodity prices pushed down headline inflation across the major AFEs. Most notably, 12-month euro-area inflation continued to trend down, falling to negative 0.6 percent in January. Declines in inflation and in market-based measures of inflation expectations since mid-2014 prompted the ECB to increase its monetary stimulus. Similar considerations led the BOJ to step up its pace of asset purchases in October. The Bank of Canada lowered its target for the overnight rate in January in light of the depressing effect of lower oil prices on Canadian inflation and economic activity, as oil exports are nearly 20 percent of total goods exports. Several other foreign central banks lowered their policy rates, either reaching or pushing further into negative territory, including in Denmark, Sweden, and

Switzerland—the last of which did so in the context of removing its floor on the euro-Swiss franc exchange rate.

Growth in the emerging market economies improved but remained subdued

Following weak growth earlier last year, overall economic activity in the EMEs improved a bit in the second half of 2014, but performance varied across economies. Growth in Asia was generally solid, supported by external demand, particularly from the United States, and improved terms of trade due to the sharp decline in commodity prices. In contrast, the decline in commodity prices, along with macroeconomic policy challenges, weighed on economic activity in several South American countries.

In China, exports expanded rapidly in the second half of last year, but fixed investment softened, as real estate investment slowed amid a weakening property market. Responding to increased concerns over the strength of growth, the authorities announced additional targeted stimulus measures in an effort to prevent the economy from slowing abruptly. In much of the rest of emerging Asia, exports, particularly to the United States, supported a step-up in growth from the first half of the year. The Mexican economy continued to grow at a moderate pace in the second half of 2014, with solid exports to the United States but lingering softness in household demand. In Brazil, economic activity remained lackluster amid falling commodity prices, diminished business confidence, and tighter macroeconomic policy. Declining oil prices were especially disruptive for several economies with heavy dependence on oil exports, including Russia and Venezuela.

Inflation continued to be subdued in most EMEs. The fall in the price of oil contributed to a moderation of headline inflation in several EMEs, including China. However, this contribution was limited in many EMEs due to the prevalence of administered energy prices, which lower the pass-through of changes in oil prices to consumer prices. In several countries, including Indonesia and Malaysia, the fall in energy prices prompted governments to cut fuel subsidies, leading to a rise in domestic prices of fuel and in inflation late in 2014. With inflation low or declining, some central banks, including those of China, Korea, and Chile, loosened monetary policy to support growth. In other EMEs, including Brazil and Malaysia, inflationary pressures stemming from depreciating currencies or from reductions in fuel subsidies prompted central banks to raise policy rates. The central bank of Russia sharply tightened monetary policy to combat inflationary pressures and stabilize its financial markets, which came under considerable pressure in late 2014.

Part 2
Monetary Policy

The Federal Open Market Committee (FOMC) concluded its asset purchase program at the end of October in light of the substantial improvement in the outlook for the labor market since the inception of the program. To support further progress toward maximum employment and price stability, the FOMC has kept the target federal funds rate at its effective lower bound and maintained the Federal Reserve's holdings of longer-term securities at sizable levels. To give greater clarity to the public about its policy outlook, the Committee has also continued to provide qualitative guidance regarding the future path of the federal funds rate. In particular, the Committee indicated at its two most recent meetings that it can be patient in beginning to normalize the stance of monetary policy and continued to emphasize the data-dependent nature of its policy stance. Following its September meeting, and as part of prudent planning, the Committee announced updated principles and plans for the eventual normalization of monetary policy.

The FOMC concluded its asset purchases at the end of October in light of substantial improvement in the outlook for the labor market

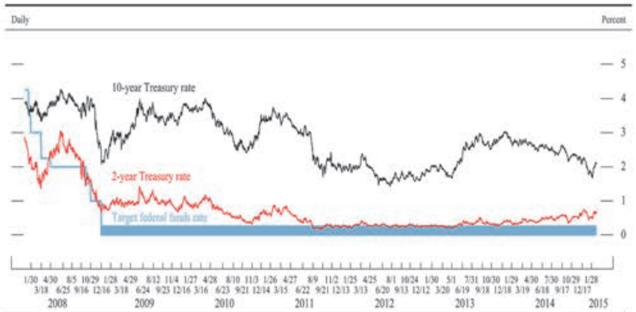
At the end of October, the FOMC ended the asset purchase program that began in September 2012 after having made further measured reductions in the pace of its asset purchases at the prior meetings in July and September.[4] The decision to end the purchase program reflected the substantial improvement in the outlook for the labor market since the program's inception—which had been the goal of the asset purchases—and the Committee's judgment that the overall recovery was sufficiently strong to support ongoing progress toward the Committee's policy objectives. However, the Committee judged that a high degree of policy accommodation still remained appropriate and maintained its existing policy of reinvesting principal payments from its holdings of agency debt and agency mortgage-backed securities (MBS) in agency MBS and of rolling over maturing Treasury securities at auction. By keeping the Federal Reserve's holdings of longer-term securities at sizable levels, this policy is expected to help maintain accommodative financial conditions by putting downward pressure on longer-term interest rates and supporting mortgage markets. In turn, those effects are expected to contribute to progress toward both the maximum employment and price stability objectives of the FOMC.

To support further progress toward its objectives, the Committee has kept the target federal funds rate at its lower bound and updated its forward rate guidance

The Committee has maintained the exceptionally low target range of 0 to ¼ percent for the federal funds rate to support further progress toward its objectives of maximum employment and price stability (figure 40). In addition, the FOMC has provided guidance about the likely future path of the federal funds rate in an effort to give greater clarity to the public about its policy outlook. In particular, the Committee has reiterated that, in determining how long to maintain this target range, it will assess realized and expected progress toward its objectives. This assessment will continue to take into account a wide range of information, including measures of labor market conditions, indicators of inflation pressures and inflation expectations, and readings on financial and international developments. Based on its assessment of these factors, before updating its guidance in December, the Committee had been indicating that it likely would be appropriate to maintain

4. See Board of Governors of the Federal Reserve System (2014), "Federal Reserve Issues FOMC Statement," press release, October 29, www.federalreserve.gov/newsevents/press/monetary/20141029a.htm.

40. Selected interest rates



Note: The 2-year and 10-year Treasury rates are the constant-maturity yields based on the most actively traded securities. The dates on the horizontal axis are those of regularly scheduled Federal Open Market Committee meetings.
Source: Department of the Treasury; Federal Reserve Board.

the current target range for the federal funds rate for a considerable time following the end of the asset purchase program, especially if projected inflation continued to run below the Committee's 2 percent longer-run goal and provided that longer-term inflation expectations remained well anchored.

In light of the conclusion of the asset purchase program at the end of October and the further progress that the economy had made toward the Committee's objectives, the FOMC updated its forward guidance at its December meeting. In particular, the Committee stated that it can be patient in beginning to normalize the stance of monetary policy, but it also emphasized that the Committee saw the revised language as consistent with the guidance in its previous statement.[5] The Committee restated the updated forward guidance following its January meeting based on its assessment of the economic information available at that time.[6]

In her December press conference, Chair Yellen emphasized that the update to the forward guidance did not signify a change in the Committee's policy intentions, but rather was a better reflection of the Committee's focus on the economic conditions that would make an increase in the federal funds rate appropriate.[7] Chair Yellen additionally indicated that, consistent with the new language, the Committee was unlikely to begin the normalization process for at least the following two meetings. There are a range of views within the Committee regarding the appropriate timing of the first increase in the federal funds rate, in part reflecting differences in participants' expectations for how the economy would evolve. By the time of liftoff, the Committee expects some further decline in the unemployment rate and additional improvement in labor market conditions. In addition, the Committee anticipates that, on the basis of incoming data, it will be reasonably confident that inflation will move back over the medium term to its 2 percent objective.

5. See Board of Governors of the Federal Reserve System (2014), "Federal Reserve Issues FOMC Statement," press release, December 17, www.federalreserve.gov/newsevents/press/monetary/20141217a.htm.

6. See Board of Governors of the Federal Reserve System (2015), "Federal Reserve Issues FOMC Statement," press release, January 28, www.federalreserve.gov/newsevents/press/monetary/20150128a.htm.

7. See Board of Governors of the Federal Reserve System (2014), "Transcript of Chair Yellen's FOMC Press Conference," December 17, www.federalreserve.gov/mediacenter/files/FOMCpresconf20141217.pdf.

The Committee has reiterated that, when it decides to begin to remove policy accommodation, it will take a balanced approach consistent with its longer-run goals of maximum employment and inflation of 2 percent. In addition, the Committee continues to anticipate that, even after employment and inflation are near mandate-consistent levels, economic conditions may, for some time, warrant keeping the target federal funds rate below levels the Committee views as normal in the longer run. As emphasized by Chair Yellen in her recent press conferences, FOMC participants provide a number of explanations for this view, with many citing the residual effects of the financial crisis. These effects are expected to ease gradually, but they are seen as likely to continue to constrain household spending for some time.

The FOMC has stressed the data-dependent nature of its policy stance and indicated that if incoming information signals faster progress than the Committee expects, increases in the target range for the federal funds rate will likely occur sooner than the Committee anticipates. The FOMC also stated that in the case of slower-than-expected progress, increases in the target range will likely occur later than anticipated.

The size of the Federal Reserve's balance sheet stabilized with the conclusion of the asset purchase program

After the conclusion of the large-scale asset purchase program at the end of October, the Federal Reserve's total assets stabilized at around \$4.5 trillion (figure 41). As a result of the asset purchases over the second half of 2014, before the completion of the program, holdings of U.S. Treasury securities in the System Open Market Account (SOMA) increased \$56 billion to \$2.5 trillion, and holdings of agency debt and agency MBS increased \$78 billion to \$1.8 trillion on net. On the liability side of the balance sheet, the increase in the Federal Reserve's assets was largely matched by increases in currency in circulation and reverse repurchase agreements.

Given the Federal Reserve's large securities holdings, interest income on the SOMA portfolio continued to support substantial remittances to the U.S. Treasury Department. Preliminary estimates suggest that the Federal

41. Federal Reserve assets and liabilities

NOTE: "Credit and liquidity facilities" consists of primary, secondary, and seasonal credit; term auction credit; central bank liquidity swaps; support for Maiden Lane, Bear Stearns, and AIG; and other credit facilities, including the Primary Dealer Credit Facility, the Asset-Backed Commercial Paper Money Market Mutual Fund Liquidity Facility, the Commercial Paper Funding Facility, and the Term Asset-Backed Securities Loan Facility. "Other assets" includes unamortized premiums and discounts on securities held outright. "Capital and other liabilities" includes reverse repurchase agreements, the U.S. Treasury General Account, and the U.S. Treasury Supplementary Financing Account. Data extend through February 18, 2015.

SOURCE: Federal Reserve Board, Statistical Release H.4.1, "Factors Affecting Reserve Balances."

Reserve provided more than $98 billion of such distributions to the Treasury in 2014 and about $500 billion on a cumulative basis since 2008.[8]

The FOMC continued to plan for the eventual normalization of monetary policy . . .

FOMC meeting participants have had ongoing discussions of issues associated with the eventual normalization of the stance and conduct of monetary policy as part of prudent planning.[9] The discussions involved various tools that could be used to control the level of short-term interest rates, even while the balance sheet of the Federal Reserve remains very large, as well as approaches to normalizing the size and composition of the Federal Reserve's balance sheet.

To inform the public about its approach to normalization and to convey the Committee's confidence in its plans, the FOMC issued a statement regarding its intentions for the eventual normalization of policy following its September meeting. (That statement is reproduced in the box "Policy Normalization Principles and Plans.") As was the case before the crisis, the Committee intends to adjust the stance of monetary policy during normalization primarily through actions that influence the level of the federal funds rate and other short-term interest rates. Regarding the balance sheet, the Committee intends to reduce securities holdings in a gradual and predictable manner primarily by ceasing to reinvest repayments of principal on securities held in the SOMA. The Committee noted that economic and financial conditions could change, and that it was prepared to make adjustments to its normalization plans if warranted.

. . . including by testing the policy tools to be used

The Federal Reserve has continued to test the operational readiness of its policy tools, conducting daily overnight reverse repurchase agreement (ON RRP) operations, a series of term RRP operations, and several tests of the Term Deposit Facility. To date, testing has progressed smoothly, and short-term market rates have generally traded above the ON RRP rate, which suggests that the facility will be a useful supplementary tool for the FOMC to use in addition to the interest rate it pays on excess reserves (the IOER rate) to control the federal funds rate during the normalization process. Overall, testing operations reinforced the Federal Reserve's confidence in its view that it has the tools necessary to tighten policy at the appropriate time. (For more discussion of the Federal Reserve's preparations for the eventual normalization of monetary policy, see the box "Additional Testing of Monetary Policy Tools.")

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8. See Board of Governors of the Federal Reserve System (2015), "Reserve Bank Income and Expense Data and Transfers to the Treasury for 2014," press release, January 9, www.federalreserve.gov/newsevents/press/other/20150109a.htm.

9. See Board of Governors of the Federal Reserve System (2014), "Minutes of the Federal Open Market Committee, July 29–30, 2014," press release, August 20, www.federalreserve.gov/newsevents/press/monetary/20140820a.htm.

Policy Normalization Principles and Plans

During its recent meetings, the Federal Open Market Committee (FOMC) discussed ways to normalize the stance of monetary policy and the Federal Reserve's securities holdings. The discussions were part of prudent planning and do not imply that normalization will necessarily begin soon. The Committee continues to judge that many of the normalization principles that it adopted in June 2011 remain applicable. However, in light of the changes in the System Open Market Account (SOMA) portfolio since 2011 and enhancements in the tools the Committee will have available to implement policy during normalization, the Committee has concluded that some aspects of the eventual normalization process will likely differ from those specified earlier. The Committee also has agreed that it is appropriate at this time to provide additional information regarding its normalization plans. All FOMC participants but one agreed on the following key elements of the approach they intend to implement when it becomes appropriate to begin normalizing the stance of monetary policy:

- The Committee will determine the timing and pace of policy normalization—meaning steps to raise the federal funds rate and other short-term interest rates to more normal levels and to reduce the Federal Reserve's securities holdings—so as to promote its statutory mandate of maximum employment and price stability.
    - When economic conditions and the economic outlook warrant a less accommodative monetary policy, the Committee will raise its target range for the federal funds rate.
    - During normalization, the Federal Reserve intends to move the federal funds rate into the target range set by the FOMC primarily by adjusting the interest rate it pays on excess reserve balances.
    - During normalization, the Federal Reserve intends to use an overnight reverse repurchase agreement facility and other supplementary tools as needed to help control the federal funds rate. The Committee will use an overnight reverse repurchase agreement facility only to the extent necessary and will phase it out when it is no longer needed to help control the federal funds rate.
- The Committee intends to reduce the Federal Reserve's securities holdings in a gradual and predictable manner primarily by ceasing to reinvest repayments of principal on securities held in the SOMA.
    - The Committee expects to cease or commence phasing out reinvestments after it begins increasing the target range for the federal funds rate; the timing will depend on how economic and financial conditions and the economic outlook evolve.
    - The Committee currently does not anticipate selling agency mortgage-backed securities as part of the normalization process, although limited sales might be warranted in the longer run to reduce or eliminate residual holdings. The timing and pace of any sales would be communicated to the public in advance.
- The Committee intends that the Federal Reserve will, in the longer run, hold no more securities than necessary to implement monetary policy efficiently and effectively, and that it will hold primarily Treasury securities, thereby minimizing the effect of Federal Reserve holdings on the allocation of credit across sectors of the economy.
- The Committee is prepared to adjust the details of its approach to policy normalization in light of economic and financial developments.

NOTE: See Board of Governors of the Federal Reserve System (2014), "Federal Reserve Issues FOMC Statement on Policy Normalization Principles and Plans," press release, September 17, www.federalreserve.gov/newsevents/press/monetary/20140917c.htm.

Additional Testing of Monetary Policy Tools

The size of the Federal Reserve's balance sheet stands at about $4.5 trillion, and reserve balances in the banking system are close to $2.5 trillion, an extraordinarily elevated level relative to the average level of reserve balances prior to the onset of the financial crisis—about $25 billion. As a result, when the Federal Open Market Committee (FOMC) eventually chooses to begin removing policy accommodation, it will do so with a level of reserves in the banking system far in excess of that during any prior period of policy tightening. As noted in the previous *Monetary Policy Report*, the Federal Reserve's elevated balance sheet implies that the traditional mechanism for tightening policy will not be feasible.[1]

As discussed in its Policy Normalization Principles and Plans, the Federal Reserve intends to move the federal funds rate into the target range set by the FOMC primarily by adjusting the interest rate it pays on excess reserve balances (the IOER rate). During policy normalization, the Federal Reserve also intends to use an overnight reverse repurchase agreement (ON RRP) facility and other supplementary tools—including term reverse repurchase agreements (term RRPs) and term deposits offered through the Term Deposit Facility (TDF)—as needed to help control the federal funds rate. As part of prudent planning, the Federal Reserve continued to test the operational readiness of these tools over the past several months, with testing evolving in terms of the offering formats, tenors and rates offered, maximum awards or allotment amounts, and eligible counterparties.[2]

With respect to RRP operations, the Federal Reserve has continued to conduct daily overnight operations and began to conduct term operations. The testing of different formats for the ON RRP operations aimed to enhance the FOMC's understanding of how an ON RRP facility might be structured to best balance the objective of supporting monetary control with those of limiting the Federal Reserve's role in financial intermediation and mitigating potential financial stability risks the facility might pose during periods of stress.[3] In addition, the spread between the ON RRP rate and the IOER rate was varied to provide the FOMC with information about the effect of that spread on money markets and the demand for ON RRPs.

With these considerations in mind, at its September meeting, the FOMC approved changes in the ON RRP exercise that included raising the counterparty-specific limit from $10 billion to $30 billion, limiting the overall size of each operation to $300 billion, and introducing an auction process that would be used to determine the interest rate and allocate take-up if the sum of bids exceeded the overall limit. In addition, during the fourth quarter of 2014, the FOMC approved further changes in the exercise under which the offering rate at the ON RRP operations was varied between 3 and 10 basis points. Participation in and usage of ON RRPs fluctuated from day to day, reflecting changes in the spread between market rates and the ON RRP rate as well as quarter-end and year-end dynamics (figure A). The limit on the overall size of the operation did not bind except at the end of the third quarter.[4] Increases in ON RRP offered rates appeared to put some upward pressure on unsecured money market rates, as anticipated, and the offered rate continued to provide a soft floor for secured rates. Changes in the ON RRP offered rate induced changes in the spread between the IOER rate of 25 basis points and the ON RRP offered rate for those days. Those changes did not appear to affect the volume of activity in the federal funds market.

The term RRP operations approved for the end of 2014 were aimed at providing the FOMC with information about the potential effectiveness of this supplementary policy tool in helping to control

1. For further discussion of how the alternative policy tools affect a range of short-term interest rates, see the box "Planning for Monetary Policy Implementation during Normalization" in Board of Governors of the Federal Reserve System (2014), *Monetary Policy Report* (Washington: Board of Governors, July), www.federalreserve.gov/monetarypolicy/mpr_20140715_part2.htm.

2. The types of counterparties that are currently eligible to participate in the Federal Reserve's ON RRP operations include depository institutions, money market funds, government-sponsored enterprises, and primary dealers, while only depository institutions may participate in TDF operations. At its December 2014 meeting, the FOMC reauthorized the ON RRP test operations through January 29, 2016. On January 16, 2015, the Federal Reserve Bank of New York announced the addition of 25 RRP counterparties, bringing the total number of counterparties to 164. These newly added counterparties are currently in the process of finalizing the operational details. Results of RRP operations can be found on the Federal Reserve Bank of New York's website at www.newyorkfed.org/markets/omo/dmm/temp.cfm, and results of the TDF operations can be found on the Federal Reserve Board's website at www.federalreserve.gov/monetarypolicy/tdf.htm.

3. For a discussion of issues related to the use of ON RRPs as a supplementary tool during normalization, see Josh Frost, Lorie Logan, Antoine Martin, Patrick McCabe, Fabio Natalucci and Julie Remache (2015), "Overnight RRP Operations as a Monetary Policy Tool: Some Design Considerations," Finance and Economics Discussion Series 2015-010 (Washington: Board of Governors of the Federal Reserve System, February), www.federalreserve.gov/econresdata/feds/2015/files/2015010pap.pdf.

4. As term RRP operations crossing year-end were conducted in addition to ON RRP operations, the limit on the overall size of the ON RRP operations did not bind at year-end.

the federal funds rate, particularly when there are significant and transitory shifts in money market activity, such as over quarter- and year-ends. To this end, the Federal Reserve conducted term RRP operations on December 8, 15, 22, and 29, with offering amounts of $50 billion for each of the first two operations and $100 billion for each of the latter two operations.[5] Although the first two term auctions were oversubscribed, the third and fourth term operations were undersubscribed. Overall, the ON RRP and term RRP operations appeared to ease downside rate pressures in money markets over year-end, and the unwinding of all four term operations on January 5, 2015, was orderly. The Federal Reserve will conduct a further test of term RRPs over quarter-ends with a series of term RRP operations spanning the March 2015 quarter-end. Also, to help advance its understanding of how term RRPs could help to control the federal funds rate, the Federal Reserve has begun a series of four term RRP test operations that do not span a quarter-end date. The first two of these operations were conducted on February 12 and on February 19. Both operations were oversubscribed, and the awarded interest rate on these two term RRPs was in line with the awarded rate on concurrent ON RRP operations.

The Federal Reserve's testing of the TDF also continued to evolve in the second half of 2014 and early 2015, with the aim of increasing participation by depository institutions as well as improving operational readiness. Since the previous *Monetary Policy Report*, the Federal Reserve conducted two series of TDF test operations. In the second half of 2014, a series of eight TDF test operations included an early withdrawal feature that allowed depository institutions to withdraw funds held in term deposits on payment of an early withdrawal penalty.[6] The maximum award amount per institution and the interest rate paid on term deposits offered through the facility were raised gradually over the course of the series in a manner broadly similar to the series of test operations conducted earlier in the year that did not include an early withdrawal feature. The level of activity increased considerably relative to the earlier test operations, with take-up reaching just over $400 billion at the final operation and nearly 100 depository institutions participating (figure B). In the second series of test operations, held in February 2015, the Federal Reserve conducted a series of weekly TDF operations offering 21-day term deposits that settled on the same day the operation was executed, eliminating the 3-day lag between the execution of an operation and settlement in previous tests. On net, the series results provide additional evidence that significant take-up can occur at a few basis points over the IOER rate even for longer terms.

5. For details on the format of these operations, see the December 1, 2014, Statement Regarding Term Reverse Repurchase Agreements on the Federal Reserve Bank of New York's website at www.newyorkfed.org/markets/opolicy/operating_policy_141201.html.

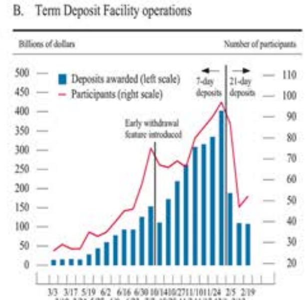
6. The early withdrawal option makes such deposits eligible to meet requirements under the Basel III Liquidity Coverage Ratio.

A. Reverse repurchase agreement operations

Note: ON RRP is overnight reverse repurchase agreement.
On September 30, 2014, ON RRP bids were $407 billion and allotments were $300 billion.

Source: Federal Reserve Bank of New York, temporary open market operations data.

B. Term Deposit Facility operations



Source: Federal Reserve Board.

Part 3
Summary of Economic Projections

The following material appeared as an addendum to the minutes of the December 16–17, 2014, meeting of the Federal Open Market Committee.

In conjunction with the Federal Open Market Committee (FOMC) meeting held on December 16–17, 2014, meeting participants submitted their projections of the most likely outcomes for real output growth, the unemployment rate, inflation, and the federal funds rate for each year from 2014 to 2017 and over the longer run.[10] Each participant's projection was based on information available at the time of the meeting plus his or her assessment of appropriate monetary policy and assumptions about the factors likely to affect economic outcomes. The longer-run projections represent each participant's assessment of the value to which each variable would be expected to converge, over time, under appropriate monetary policy and in the absence of further shocks to the economy. "Appropriate monetary policy" is defined as the future path of policy that each participant deems most likely to foster outcomes for economic activity and inflation that best satisfy his or her individual interpretation of the Federal Reserve's objectives of maximum employment and stable prices.

Overall, FOMC participants expected that, after a slowdown in the first half of 2014, economic growth under appropriate policy would be faster in the second half of 2014 and over 2015 and 2016 than their estimates of the U.S. economy's longer-run normal growth rate. On balance, participants then saw economic growth moving back toward their assessments of its longer-run pace in 2017 (table 1 and figure 1). Most participants projected that the

10. As discussed in its Policy Normalization Principles and Plans, released on September 17, 2014, the Committee intends to target a range for the federal funds rate during normalization. Participants were asked to provide, in their contributions to the Summary of Economic Projections, either the midpoint of the target range for the federal funds rate for any period when a range was anticipated or the target level for the federal funds rate, as appropriate. In the lower panel of figure 2, these values have been rounded to the nearest ⅛ percentage point.

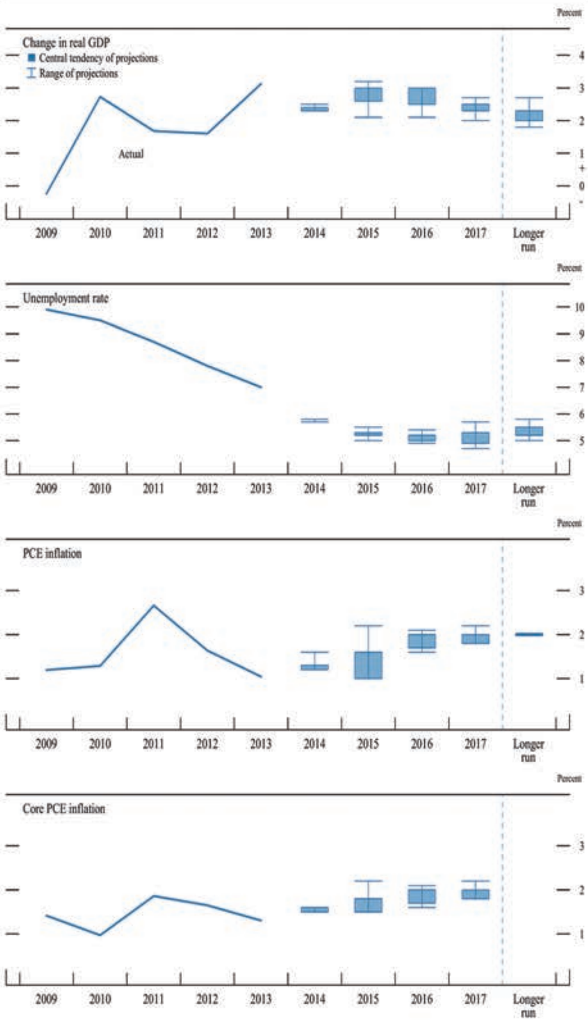
Table 1. Economic projections of Federal Reserve Board members and Federal Reserve Bank presidents, December 2014
Percent

Variable	Central tendency[1]					Range[2]				
	2014	2015	2016	2017	Longer run	2014	2015	2016	2017	Longer run
Change in real GDP	2.3 to 2.4	2.6 to 3.0	2.5 to 3.0	2.3 to 2.5	2.0 to 2.3	2.3 to 2.5	2.1 to 3.2	2.1 to 3.0	2.0 to 2.7	1.8 to 2.7
September projection	2.0 to 2.2	2.6 to 3.0	2.6 to 2.9	2.3 to 2.5	2.0 to 2.3	1.8 to 2.3	2.1 to 3.2	2.1 to 3.0	2.0 to 2.6	1.8 to 2.6
Unemployment rate	5.8	5.2 to 5.3	5.0 to 5.2	4.9 to 5.3	5.2 to 5.5	5.7 to 5.8	5.0 to 5.5	4.9 to 5.4	4.7 to 5.7	5.0 to 5.8
September projection	5.9 to 6.0	5.4 to 5.6	5.1 to 5.4	4.9 to 5.3	5.2 to 5.5	5.7 to 6.1	5.2 to 5.7	4.9 to 5.6	4.7 to 5.8	5.0 to 6.0
PCE inflation	1.2 to 1.3	1.0 to 1.6	1.7 to 2.0	1.8 to 2.0	2.0	1.2 to 1.6	1.0 to 2.2	1.6 to 2.1	1.8 to 2.2	2.0
September projection	1.5 to 1.7	1.6 to 1.9	1.7 to 2.0	1.9 to 2.0	2.0	1.5 to 1.8	1.5 to 2.4	1.6 to 2.1	1.7 to 2.2	2.0
Core PCE inflation[3]	1.5 to 1.6	1.5 to 1.8	1.7 to 2.0	1.8 to 2.0		1.5 to 1.6	1.5 to 2.2	1.6 to 2.1	1.8 to 2.2	
September projection	1.5 to 1.6	1.6 to 1.9	1.8 to 2.0	1.9 to 2.0		1.5 to 1.8	1.6 to 2.4	1.7 to 2.2	1.8 to 2.2	

Note: Projections of change in real gross domestic product (GDP) and projections for both measures of inflation are percent changes from the fourth quarter of the previous year to the fourth quarter of the year indicated. PCE inflation and core PCE inflation are the percentage rates of change in, respectively, the price index for personal consumption expenditures (PCE) and the price index for PCE excluding food and energy. Projections for the unemployment rate are for the average civilian unemployment rate in the fourth quarter of the year indicated. Each participant's projections are based on his or her assessment of appropriate monetary policy. Longer-run projections represent each participant's assessment of the rate to which each variable would be expected to converge under appropriate monetary policy and in the absence of further shocks to the economy. The September projections were made in conjunction with the meeting of the Federal Open Market Committee on September 16–17, 2014.

1. The central tendency excludes the three highest and three lowest projections for each variable in each year.
2. The range for a variable in a given year includes all participants' projections, from lowest to highest, for that variable in that year.
3. Longer-run projections for core PCE inflation are not collected.

Figure 1. Central tendencies and ranges of economic projections, 2014–17 and over the longer run



NOTE: Definitions of variables are in the general note to table 1. The data for the actual values of the variables are annual.

unemployment rate will continue to decline in 2015 and 2016, and all participants projected that the unemployment rate will be at or below their individual judgments of its longer-run normal level by the end of 2016. All participants projected that inflation, as measured by the four-quarter change in the price index for personal consumption expenditures (PCE), would rise gradually, on balance, over the next few years. Most participants saw inflation approaching the Committee's 2 percent longer-run objective in 2016 and 2017. While a few participants projected that inflation would rise temporarily above 2 percent during the forecast period, many others expected inflation to remain low through 2017.

Participants judged that it would be appropriate to begin raising the target range for the federal funds rate over the projection period as labor market indicators and inflation move back toward values the Committee judges consistent with the attainment of its mandated objectives of maximum employment and stable prices. As shown in figure 2, all but a couple of participants anticipated that it would be appropriate to begin raising the target range for the federal funds rate in 2015, with most projecting that it will be appropriate to raise the target federal funds rate fairly gradually.

Most participants viewed the uncertainty associated with their outlooks for economic growth and the unemployment rate as broadly similar to the average level of the past 20 years. Most participants also judged the level of uncertainty about inflation to be broadly similar to the average level of the past 20 years, although a few participants viewed it as higher. In addition, most participants continued to see the risks to the outlook for economic growth and for the unemployment rate as broadly balanced. A majority saw the risks to inflation as broadly balanced; however, a number of participants saw the risks to inflation as weighted to the downside, while one judged these risks as tilted to the upside.

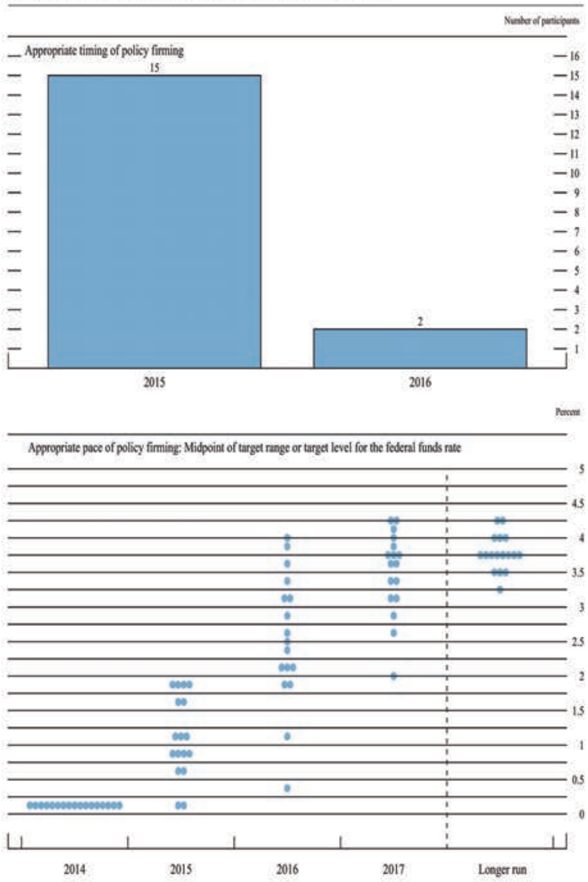
The Outlook for Economic Activity

Participants projected that, conditional on their individual assumptions about appropriate monetary policy, growth in real gross domestic product (GDP) would pick up from its low level in the first half of 2014 and run above their estimates of its longer-run normal rate in the second half of 2014 and over 2015 and 2016. Participants pointed to a number of factors that they expected would contribute to stronger real output growth, including improving labor market conditions, lower energy prices, rising household net worth, diminishing restraint from fiscal policy, and highly accommodative monetary policy. On balance, participants saw real GDP growth moving back toward, but remaining at or somewhat above, its longer-run rate in 2017 as monetary policy adjusts appropriately.

In general, participants' revisions to their forecasts for real GDP growth relative to their projections for the September meeting were modest. However, all participants revised up their projections of real GDP growth somewhat for 2014, with a number of them noting that recent data releases regarding real economic activity had been stronger than anticipated. The central tendencies of participants' current projections for real GDP growth were 2.3 to 2.4 percent in 2014, 2.6 to 3.0 percent in 2015, 2.5 to 3.0 percent in 2016, and 2.3 to 2.5 percent in 2017. The central tendency of the projections of real GDP growth over the longer run was 2.0 to 2.3 percent, unchanged from September.

All participants projected that the unemployment rate will decline, on balance, through 2016, and all participants projected that, by the end of that year, the unemployment rate will be at or below their individual judgments of its longer-run normal level. The central tendencies of participants' forecasts for the unemployment rate in the fourth quarter of each year were 5.8 percent in 2014, 5.2 to 5.3 percent in 2015, 5.0 to 5.2 percent in 2016, and 4.9 to 5.3 percent

Figure 2. Overview of FOMC participants' assessments of appropriate monetary policy



NOTE: In the upper panel, the height of each bar denotes the number of FOMC participants who judge that, under appropriate monetary policy, the first increase in the target range for the federal funds rate from its current range of 0 to ¼ percent will occur in the specified calendar year. In September 2014, the numbers of FOMC participants who judged that the first increase in the target federal funds rate would occur in 2014, 2015, and 2016 were, respectively, 1, 14, and 2. In the lower panel, each shaded circle indicates the value (rounded to the nearest ⅛ percentage point) of an individual participant's judgment of the midpoint of the appropriate target range for the federal funds rate or the appropriate target level for the federal funds rate at the end of the specified calendar year or over the longer run.

in 2017. Almost all participants' projected paths for the unemployment rate shifted down slightly through 2015 compared with their projections in September; many participants noted that recent data pointing to improving labor market conditions were an important factor underlying the downward revisions in their unemployment rate forecasts. The central tendency of participants' estimates of the longer-run normal rate of unemployment that would prevail under appropriate monetary policy and in the absence of further shocks to the economy was unchanged at 5.2 to 5.5 percent; the range of these estimates was 5.0 to 5.8 percent, down slightly from 5.0 to 6.0 percent in September.

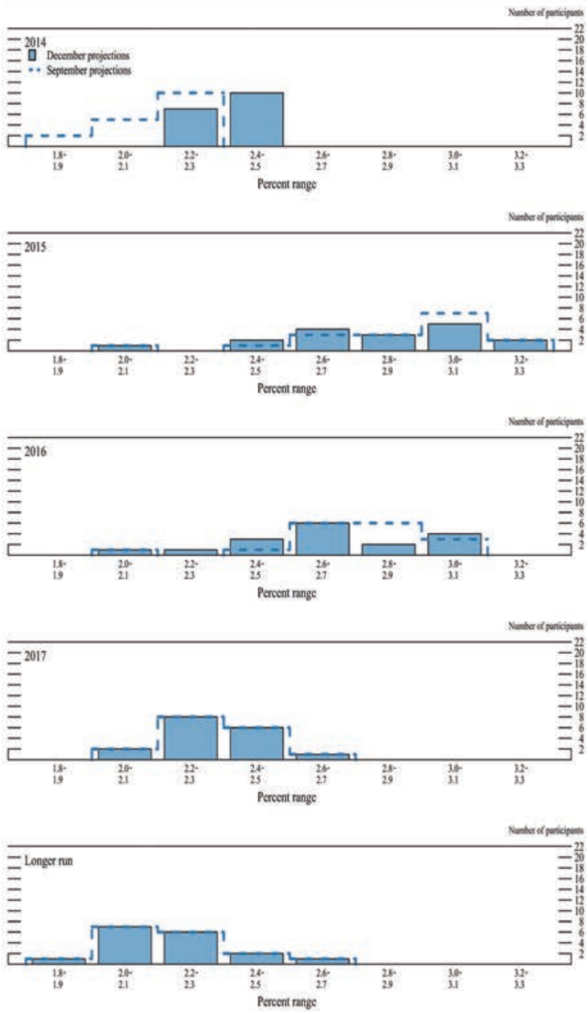
Figures 3.A and 3.B show that participants held a range of views regarding the likely outcomes for real GDP growth and the unemployment rate through 2017. Some of the diversity of views reflected their individual assessments of the effects of lower oil prices on consumer spending and business investment, of the rate at which the forces that have been restraining the pace of the economic recovery would continue to abate, of the trajectory for growth in consumption as labor market slack diminishes, and of the appropriate path of monetary policy. Relative to September, the dispersion of participants' projections for real GDP growth was little changed from 2015 to 2017, while for the unemployment rate, the dispersion was a bit narrower.

The Outlook for Inflation

Compared with September, the central tendencies of participants' projections for PCE inflation under the assumption of appropriate monetary policy moved down for 2014 and 2015 but were largely unchanged for 2016 and 2017. In commenting on the changes to their projections, many participants indicated that the significant decline in energy prices and the appreciation of the dollar since the Committee's September meeting likely will put temporary downward pressure on inflation. The central tendencies of participants' projections for core PCE inflation moved down somewhat for 2015 but were mostly unchanged in other years. Almost all participants projected that PCE inflation would rise gradually, on balance, over the period from 2015 to 2017, reaching a level at or near the Committee's 2 percent objective. A few participants expected PCE inflation to rise slightly above 2 percent at some point during the forecast period, while many others expected inflation to remain below 2 percent for the entire period. The central tendencies for PCE inflation were 1.2 to 1.3 percent in 2014, 1.0 to 1.6 percent in 2015, 1.7 to 2.0 percent in 2016, and 1.8 to 2.0 percent in 2017. The central tendencies of the forecasts for core inflation were higher than those for the headline measure in 2014 and 2015, reflecting the effects of lower oil prices. The central tendencies of the two measures were equal in 2016 and in 2017. Factors cited by participants as likely to contribute to a gradual rise of inflation toward the Committee's longer-run objective of 2 percent included stable longer-term inflation expectations, steadily diminishing resource slack, a pickup in wage growth, waning effects of declines in oil prices, and still-accommodative monetary policy.

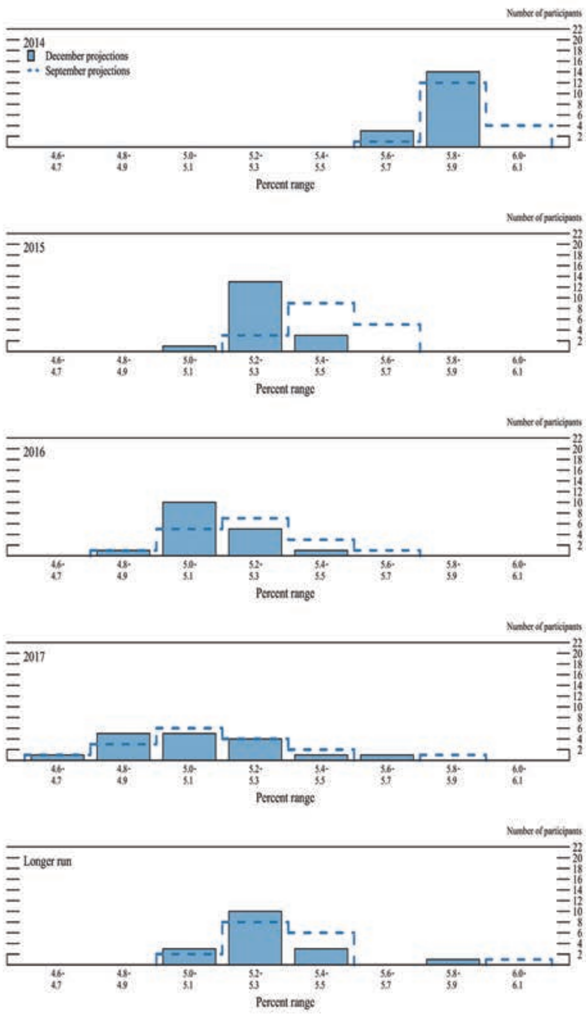
Figures 3.C and 3.D provide information on the diversity of participants' views about the outlook for inflation. In addition to moving lower, the range of participants' projections for PCE inflation in 2015 widened somewhat relative to September, likely reflecting in part differences in participants' assessments of the effects of the recent decline in energy prices on the outlook for inflation. The ranges for core inflation narrowed in 2014 and 2015. In other years of the projection, the ranges of the inflation projections were relatively little changed. The range for both measures in 2017 continued to show a very substantial concentration near the Committee's 2 percent longer-run objective by that time.

Figure 3.A. Distribution of participants' projections for the change in real GDP, 2014–17 and over the longer run



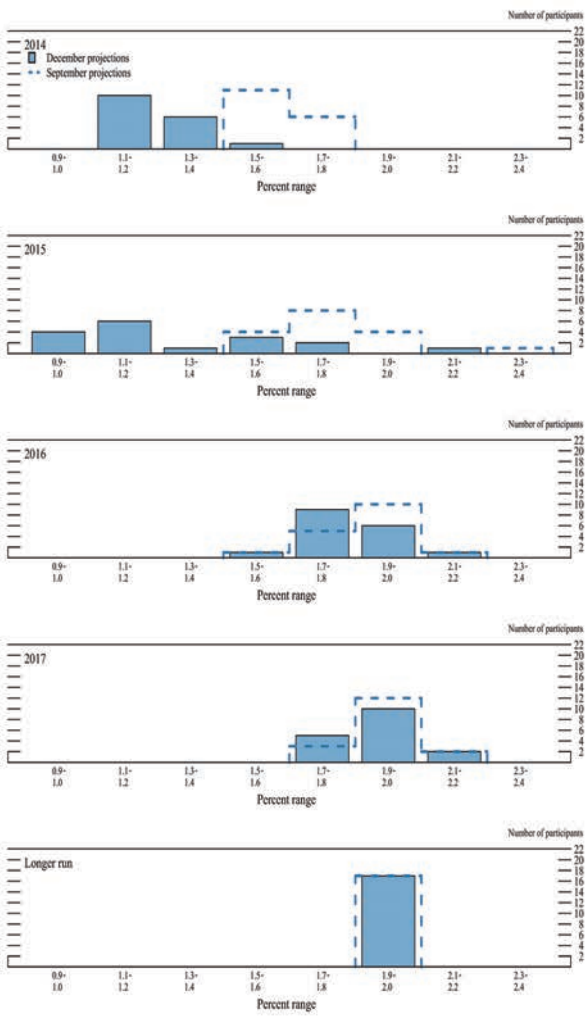
NOTE: Definitions of variables are in the general note to table 1.

Figure 3.B. Distribution of participants' projections for the unemployment rate, 2014–17 and over the longer run



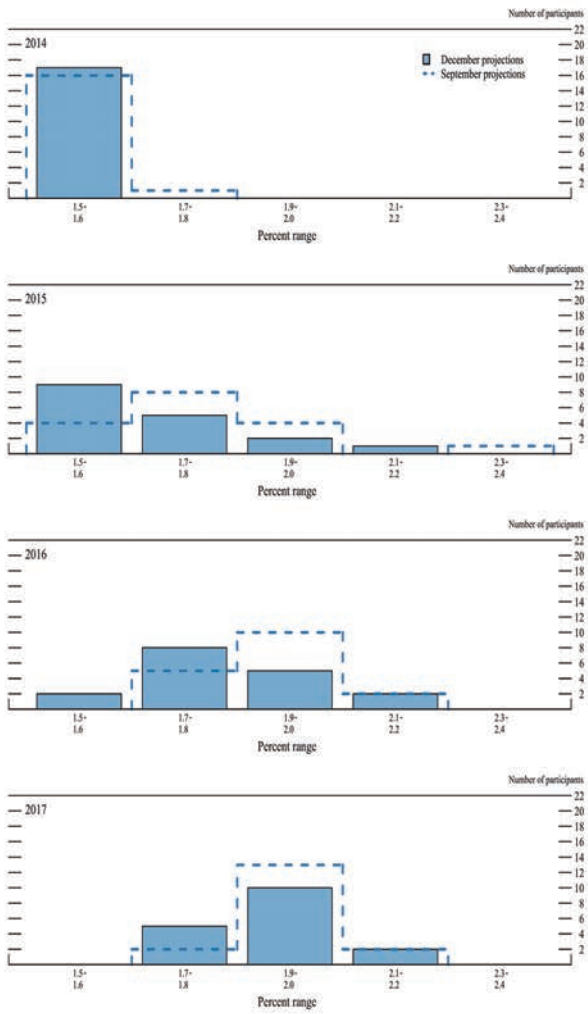
NOTE: Definitions of variables are in the general note to table 1.

Figure 3.C. Distribution of participants' projections for PCE inflation, 2014–17 and over the longer run



Note: Definitions of variables are in the general note to table 1.

Figure 3.D. Distribution of participants' projections for core PCE inflation, 2014–17



Note: Definitions of variables are in the general note to table 1.

Appropriate Monetary Policy

Participants judged that it would be appropriate to begin raising the target range for the federal funds rate over the projection period as labor market indicators and inflation move back toward values the Committee judges consistent with the attainment of its mandated objectives of maximum employment and price stability. As shown in figure 2, all but two participants anticipated that it would be appropriate to begin raising the target range for the federal funds rate during 2015. However, most projected that the appropriate level of the federal funds rate would remain considerably below its longer-run normal level through 2016. Most participants expected the appropriate level of the federal funds rate would be near, or already would have reached, their individual view of its longer-run normal level by the end of 2017.

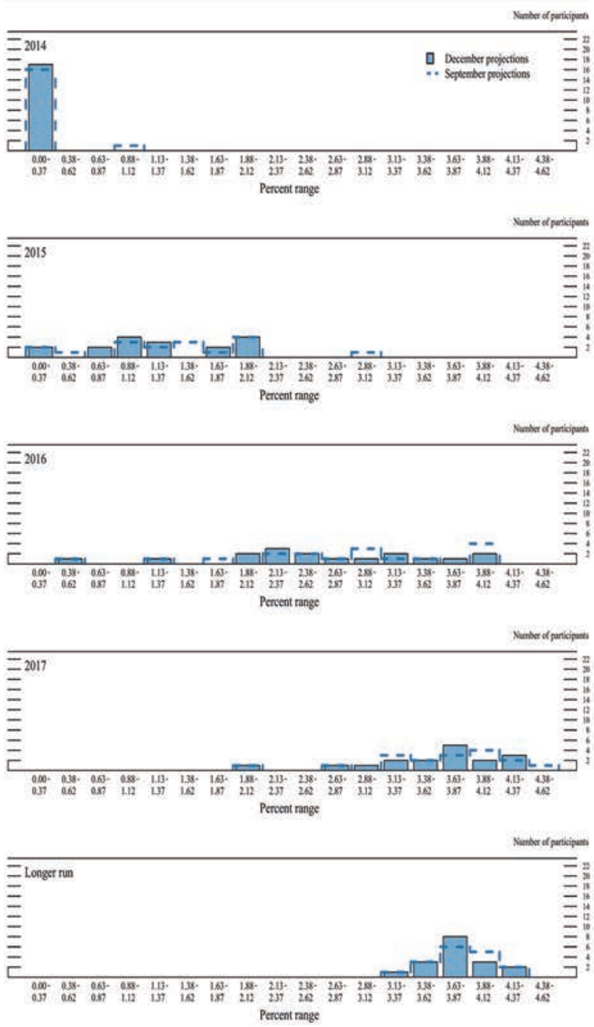
All participants projected that the unemployment rate would be at or below 5.5 percent at the end of the year in which they judged the initial increase in the target range for the federal funds rate would be warranted, and all but one anticipated that inflation would be at or below the Committee's 2 percent goal at the end of that year. Most participants projected that the unemployment rate would be at or somewhat above their estimates of its longer-run normal level at that time.

Figure 3.E provides the distribution of participants' judgments regarding the appropriate level of the target federal funds rate, conditional on their assessments of the economic outlook, at the end of each calendar year from 2014 to 2017 and over the longer run. All participants judged that economic conditions would warrant maintaining the current exceptionally low level of the federal funds rate into 2015. The median values of the federal funds rate at the end of 2015 and 2016 fell 25 basis points and 38 basis points relative to September, to 1.13 percent and 2.50 percent, respectively, while the mean values fell 15 basis points for both years, to 1.13 percent in 2015 and 2.54 percent in 2016. The dispersion of the projections for the appropriate level of the federal funds rate was narrower in 2014 and 2015 and was little changed in 2016 and 2017. Most participants judged that it would be appropriate to set the federal funds rate at or near its longer-run normal level in 2017, although a number of them projected that the federal funds rate would still need to be set appreciably below its longer-run normal level at that time and one anticipated that it would be appropriate to target a level noticeably above its longer-run normal level. Participants provided a number of reasons why they thought it would be appropriate for the federal funds rate to remain below its longer-run normal level for some time after inflation and the unemployment rate were near mandate-consistent levels. These reasons included an assessment that the headwinds that have been holding back the recovery will continue to exert some restraint on economic activity at that time, that residual slack in the labor market will still be evident in other measures of labor utilization, and that the risks to the economic outlook are asymmetric as a result of the constraints on monetary policy associated with the effective lower bound on the federal funds rate.

As in September, estimates of the longer-run level of the federal funds rate ranged from 3.25 to 4.25 percent. All participants judged that inflation over the longer run would be equal to the Committee's inflation objective of 2 percent, implying that their individual judgments regarding the appropriate longer-run level of the real federal funds rate in the absence of further shocks to the economy ranged from 1.25 to 2.25 percent.

Participants' views of the appropriate path for monetary policy were informed by their judgments about the state of the economy, including the values of the unemployment rate and other labor market indicators that would be consistent with maximum employment, the extent to which the economy was currently falling short of maximum employment,

Figure 3.E. Distribution of participants' projections for the target federal funds rate, 2014–17 and over the longer run



NOTE: The target federal funds rate is measured as the level of the target rate at the end of the calendar year or in the longer run.

the prospects for inflation to return to the Committee's longer-term objective of 2 percent, the desire to minimize potential disruption in financial markets by avoiding unusually rapid increases in the federal funds rate, and the balance of risks around the outlook. Some participants also mentioned the prescriptions of various monetary policy rules as factors they considered in judging the appropriate path for the federal funds rate.

Uncertainty and Risks

Nearly all participants continued to judge the levels of uncertainty attending their projections for real GDP growth and the unemployment rate as broadly similar to the norms during the previous 20 years (figure 4).[11] Most participants continued to see the risks to their outlooks for real GDP growth as broadly balanced. A few participants viewed the risks to real GDP growth as weighted to the downside; one viewed the risks as weighted to the upside. Those participants who viewed the risks as weighted to the downside cited, for example, concern about the limited ability of monetary policy at the effective lower bound to respond to further negative shocks to the economy or about the trajectory for economic growth abroad. As in September, nearly all participants judged the risks to the outlook for the unemployment rate to be broadly balanced.

11. Table 2 provides estimates of the forecast uncertainty for the change in real GDP, the unemployment rate, and total consumer price inflation over the period from 1994 through 2013. At the end of this summary, the box "Forecast Uncertainty" discusses the sources and interpretation of uncertainty in the economic forecasts and explains the approach used to assess the uncertainty and risks attending the participants' projections.

Table 2. Average historical projection error ranges
Percentage points

Variable	2014	2015	2016	2017
Change in real GDP[1]	±0.9	±1.8	±2.1	±2.1
Unemployment rate[1]	±0.2	±0.8	±1.4	±1.8
Total consumer prices[2]	±0.2	±0.9	±1.0	±1.0

NOTE: Error ranges shown are measured as plus or minus the root mean squared error of projections for 1994 through 2013 that were released in the winter by various private and government forecasters. As described in the box "Forecast Uncertainty," under certain assumptions, there is about a 70 percent probability that actual outcomes for real GDP, unemployment, and consumer prices will be in ranges implied by the average size of projection errors made in the past. For more information, see David Reifschneider and Peter Tulip (2007), "Gauging the Uncertainty of the Economic Outlook from Historical Forecasting Errors," Finance and Economics Discussion Series 2007-60 (Washington: Board of Governors of the Federal Reserve System, November), available at www.federalreserve.gov/pubs/feds/2007/200760/200760abs.html; and Board of Governors of the Federal Reserve System, Division of Research and Statistics (2014), "Updated Historical Forecast Errors," memorandum, April 9, www.federalreserve.gov/foia/files/20140409-historical-forecast-errors.pdf.

1. Definitions of variables are in the general note to table 1.

2. Measure is the overall consumer price index, the price measure that has been most widely used in government and private economic forecasts. Projection is percent change, fourth quarter of the previous year to the fourth quarter of the year indicated.

As in September, participants generally agreed that the levels of uncertainty associated with their inflation forecasts were broadly similar to historical norms, and most saw the risks to those projections as broadly balanced. A number of participants, however, viewed the risks to their inflation forecasts as tilted to the downside; the reasons discussed included the possibility that the recent low levels of inflation could prove more persistent than anticipated; the possibility that the upward pull on prices from inflation expectations might be weaker than assumed; or the judgment that, in current circumstances, it would be difficult for the Committee to respond effectively to low-inflation outcomes. Conversely, one participant saw upside risks to inflation, citing uncertainty about the timing and efficacy of the Committee's withdrawal of monetary policy accommodation.

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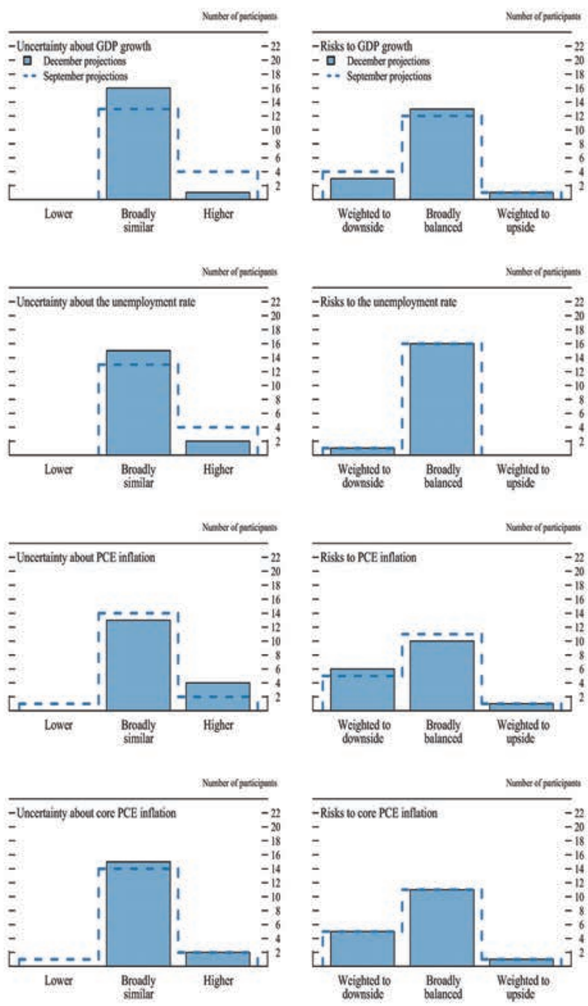
Figure 4. Uncertainty and risks in economic projections



NOTE: For definitions of uncertainty and risks in economic projections, see the box "Forecast Uncertainty." Definitions of variables are in the general note to table 1.

Forecast Uncertainty

The economic projections provided by the members of the Board of Governors and the presidents of the Federal Reserve Banks inform discussions of monetary policy among policymakers and can aid public understanding of the basis for policy actions. Considerable uncertainty attends these projections, however. The economic and statistical models and relationships used to help produce economic forecasts are necessarily imperfect descriptions of the real world, and the future path of the economy can be affected by myriad unforeseen developments and events. Thus, in setting the stance of monetary policy, participants consider not only what appears to be the most likely economic outcome as embodied in their projections, but also the range of alternative possibilities, the likelihood of their occurring, and the potential costs to the economy should they occur.

Table 2 summarizes the average historical accuracy of a range of forecasts, including those reported in past *Monetary Policy Reports* and those prepared by the Federal Reserve Board's staff in advance of meetings of the Federal Open Market Committee. The projection error ranges shown in the table illustrate the considerable uncertainty associated with economic forecasts. For example, suppose a participant projects that real gross domestic product (GDP) and total consumer prices will rise steadily at annual rates of, respectively, 3 percent and 2 percent. If the uncertainty attending those projections is similar to that experienced in the past and the risks around the projections are broadly balanced, the numbers reported in table 2 would imply a probability of about 70 percent that actual GDP would expand within a range of 2.1 to 3.9 percent in the current year, 1.2 to 4.8 percent in the second year, and 0.9 to 5.1 percent in the third and fourth years. The corresponding 70 percent confidence intervals for overall inflation would be 1.8 to 2.2 percent in the current year, 1.1 to 2.9 percent in the second year, and 1.0 to 3.0 percent in the third and fourth years.

Because current conditions may differ from those that prevailed, on average, over history, participants provide judgments as to whether the uncertainty attached to their projections of each variable is greater than, smaller than, or broadly similar to typical levels of forecast uncertainty in the past, as shown in table 2. Participants also provide judgments as to whether the risks to their projections are weighted to the upside, are weighted to the downside, or are broadly balanced. That is, participants judge whether each variable is more likely to be above or below their projections of the most likely outcome. These judgments about the uncertainty and the risks attending each participant's projections are distinct from the diversity of participants' views about the most likely outcomes. Forecast uncertainty is concerned with the risks associated with a particular projection rather than with divergences across a number of different projections.

As with real activity and inflation, the outlook for the future path of the federal funds rate is subject to considerable uncertainty. This uncertainty arises primarily because each participant's assessment of the appropriate stance of monetary policy depends importantly on the evolution of real activity and inflation over time. If economic conditions evolve in an unexpected manner, then assessments of the appropriate setting of the federal funds rate would change from that point forward.

Abbreviations

AFE	advanced foreign economy
BHC	bank holding company
BOJ	Bank of Japan
CDS	credit default swap
C&I	commercial and industrial
ECB	European Central Bank
ECI	employment cost index
E&I	equipment and intangibles
EME	emerging market economy
FOMC	Federal Open Market Committee; also, the Committee
GDP	gross domestic product
IOER	interest on excess reserves
MBS	mortgage-backed securities
ON RRP	overnight reverse repurchase agreement
OPEC	Organization of the Petroleum Exporting Countries
PCE	personal consumption expenditures
RRP	reverse repurchase agreement
SEP	Summary of Economic Projections
SLOOS	Senior Loan Officer Opinion Survey on Bank Lending Practices
SOMA	System Open Market Account
S&P	Standard & Poor's